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ABSTRACT

This yearbook contains selected papers presented at the twenty-third and twenty-fourth annual meetings of the North Central Reading Association, held in October of 1981 and 1982. Papers in the yearbook include: "History of Adult Reading Programs" (Clarence Anderson); "About Creativity and Study Skills" (Mark E. Thompson); "Recent Changes in Student Life Styles: Effects on Reading" (Dale M. Brethower); "Learning Style Inventories: Boon or Boondoggle for College-Adult Reading Programs?" (James E. Walker); "Reducing Test Anxiety Effects on Reading Comprehension of College Students" (David M. Wark and others); "Case Reports on Test Anxiety" (Anna L. Fussel); "OVOL--Reading/Clozure/Deletions Optimum Involvement: Theoretical Reading Improvement Model and CLozure Pilot Study" (Bruce Lloyd and others); "Individualizing a Reading and Study Skills Course" (Susan Whitmer); "Computerized Diagnosis/Prescription in a Learning Lab" (Donald Goodman and Sandra Schwab); "Learning Skills and Learning Environment: Relating Developmental Courses to Institutional Expectations and Demands" (Sharon L. Smith and Janet J. Jackson); "But Does it Transfer?" (Lee McMillen and Cleo McMillen); and "Annotated Bibliography of Reading Tests" (Joseph A. Fisher). (RS)

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COLLEGE and ADULT
READING
VOLUME XI

North Central Reading Association

1982 Yearbook

Edited by
JOSEPH A. FISHER
Drake University

1982

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PREFACE

Volume XI of the proceedings of the North Central Reading Association contains selected papers presented at the 23rd and 24th annual meetings held at Notre Dame University on October 23-25, 1980 and October 25-27, 1981.

The board wishes to express its appreciation to Boyd Jackson, Dick Willemin, and James Powell for serving as the program committee for these two meetings. A special thanks is extended to the University of Notre Dame Center for Continuing Education for the use of their splendid facilities and handling the mundane chores associated with making these conferences a physical possibility.

A major part in the success of any conference is the participation of those in attendance. The cordial and informal quality of our meetings making them so pleasant are graciously supplied by the membership. In a real sense, they help make these meetings successful and memorable.

This year we will lose two very special board members who served NCRA faithfully and ably for many years. Fred E. Davidson of Kent State and Boyd Jackson of the University of Illinois will retire this year. The association will miss their able contributions to its work and the entire membership will miss them in the informal interchange and professional shop-talk that has become such an integral part of our meetings. Though they are not with us physically, memories of their presence will continue in the work they have shared with us and the professional purposes they have helped us develop. Our sincerest thanks and appreciation are extended to Fred and Boyd along with our fondest good wishes for their continued successful and meaningful lives in retirement.

At the last board meeting Clarence Anderson, Charles Stewart Mott Community College; Mark Thompson of Educational Services, Department of Agriculture; and Michael Bennett of the University of Minnesota were elected to the board. We congratulate them on their election and anticipate their active involvement in the promotion of the purposes of the association and its work.

The editor wishes to thank Mrs. Margaret Foglesong for her able assistance in the preparation of this manuscript and the Office of Student Services of Drake University for granting her and the editor the time and facilities needed to complete this project.

Jospeh A. Fisher
Drake University

Additional copies of all Yearbooks may be obtained from:

David M. Wark
190 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55101

Eleventh NCRA Yearbook

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History of Adult Reading Programs

Clarence Anderson
Charles Stewart Mott Community College

ABSTRACT

The adult reading movement has a long history. To record it is a challenging experience. I first researched this topic in the early fifties prior to my first college reading assignment. I recall that the task was a rather easy one--there wasn't much available. Today, by contrast, there is so much available that the task seems almost overwhelming. To illustrate, Bliesmer (1973) in his annual review of research in college-adult reading reported over two hundred studies which appeared in the literature from September 1971 through September, 1972. This represents history for only a one year period. This paper will present a "brief" history of college-adult reading, it will summarize the major trends and practices in adult reading programs as I perceive them.

Early History

Programs in college-adult reading originated from the recognition of felt needs. Brubacher and Willis (1976) cited a number of universities which early in their histories reported the need for reading improvement programs: Michigan, 1852; Iowa State College, 1870; and Harvard, Yale, Princeton, and Columbia, 1907. Cross (1976) reported that Wellesley College introduced its first remedial course in 1894.

The Work of Psychologists

As the field of psychology developed during the latter part of the 19th century, early psychologists were fascinated with studying the process of reading as a perceptual act and psychology students were the subjects of the first reported reading experiments. William James, Javal, Cattell, Erdman, Dodge, Huey, Dearborn and other psychologists were interested in the different phenomena which accompanied reading. Huey (1910) described reading as the most remarkable specific performance to analyze what we do when we read would require a knowledge of the workings of the human mind.

The development of high speed photographic techniques also intrigued early psychologists, who performed many studies of the way adults perceived words. College reading programs emerged from the laboratories of psychologists. However, eye movement studies showed that mature reading is really an act of synthesizing ideas, not merely perception of words. Thus, emphasis moved from the psychologist and the laboratory to the teacher and the classroom.

Classroom Developments

In 1909, F.M. McMurray published How to Study and Teaching How to Study. This book led to the development of improved reading methods. As early as this date, reading and study were considered synonymous to many people.

Following McMurray's publication, reading courses found their way into our nation's college and university classrooms. Parr (1930) in the earliest survey ever made, reported 24 reading programs in our nation's colleges. The next early survey, reported by Strang (1937) cited 82 colleges with programs. Traxler (1938) listed additional colleges with programs underway. Some of the prestigious universities starting programs were New York University in 1936, Harvard University and the University of Minnesota in 1938.

The years 1945-1955 saw an astounding growth of various types of college reading programs. There was an increase in the number and variety of instructional aids. Causey (1955) recorded 418 programs, the most ever in reading history. Twenty-five different workbooks were used along with other hardware. College departments sponsoring reading programs were usually English, Education, and Psychology. One word alone can describe the college reading programs at this time--DIVERSITY. There were many good reading programs, but no one best reading program.

The Advent of Industrial Reading

As adult reading programs continued to increase in number, no growth was more frantic during the fifties than the development of programs in business and industry. Because of reading demands, industry had been interested in reading programs for years. New York University was one of the first to conduct programs. Miller (1967) reported that NYU's program ran successfully for 13 years, serving the metropolitan area of New York. Patterson (1965) related that during a ten year period over 9,000 employees participated in various aspects of the

General Motors Institute reading improvement programs in Flint, Michigan. New York City and Flint appeared to be two of the nation's "hot spots" in industrial reading.

Industrial programs were very similar to college reading programs. They were largely taught by college reading teachers who used industrial plants for extension centers. Industrial programs, as a rule, offered no college credit and were shorter in length than college courses.

The Decline of Industrial Programs

In the middle sixties, there developed less of a rush on the part of industry to get into reading programs. As early as 1955, Summerfield expressed fears that this would happen. He concluded that reading programs at the industrial level may be entering a situation which might be likened to a fad stage. Further evidence of the industrial decline was established by Berger (1971) in 1968. At that time, questionnaires were sent to 500 of our largest corporations, our previous best supporters of industrial reading programs. Only 11 percent responded to the survey, indicating that interest was no longer there. Johnson (1973) provided possibly the most comprehensive study as to the decline of industrial reading instruction. He concluded that (1) the courses were oversold; (2) there was quackery in speed--a fad stage; (3) too much emphasis was placed on mechanical devices before their real effectiveness was determined; (4) no core of reading specialists became too concerned about industrial reading; (5) no research eminated from industrial reading and it stood still; and (6) there was no diagnostic service or individualization of instruction.

One of the more recent attempts at industrial reading was described by Anderson (1978). During a two year period, mini-reading improvement units were taught within management training at A C Spark Plug division of General Motors. Avoiding some of the pitfalls reported by Johnson, Anderson found, via monthly company evaluations, that the course was highly successful. However, current economic retrenchment forced General Motors to abandon the entire training program, including reading.

Counseling and Reading

While industrial programs continued their downward trend, college reading programs continued their onward growth. However, in the early sixties, there was a shifting scene in reading training at the college level. The movement was away from group methods and techniques to individual methods and approaches. McConihe (1967) described the two major thrusts as 1) reading becoming more counselling oriented, and 2) reading training becoming more individualized.

The introduction of counselling into reading programs has changed the course of such programs. The coupling of guidance and reading can unquestionably be recorded as one of history's turning points in college reading education. The reading function involves aspects of both guidance and reading. The teaching of reading is a process of helping every individual, through his own efforts, to discover and develop his reading potentialities for his self-fulfillment and social usefulness. The teacher knows techniques of studying the individual, recognizing differences among students in achievement, motivation, and dealing with minor emotional and personality factors that may interfere with progress in reading.

Jackson (1963) reported that the best reading training is that which is counselling oriented. This reduces the almost indiscriminate use of drills for all students and provides an opportunity for individualization as a supplement to group work.

Counselling, Jackson concluded, is an important means of improving reading ability by reducing emotional barriers to reading and emphasizing the individual participation in the act of reading.

Individualized Reading

With the greater recognition of individual differences came individualized instruction. Raygor (1965) was an early advocate of self-instructional, individualized college reading. He reported that his university improved its program effectiveness by changing from a lockstep, mass approach that assumed equivalent needs on the part of all students. The key to the program was a series of self-instructional materials.

Anderson (1968, 1969, 1970, 1971, 1973, 1974) was an early practitioner of individualized instruction at the two-year college level. In 1965, Flint Junior College departed completely from traditional ways of handling incompetent readers. Successive studies from 1968 through 1974 revealed that individualized instruction was very effective in meeting course objectives and in serving Flint students. Over the years, the numerous problems associated with such teaching were largely overcome.

Rouche and Mink (1976) concluded after extensive research that, generally, high-risk students profit most from the structured success available through carefully designed, individualized instruction handled by skillful and caring teachers. The movement toward individualized reading has continued as a popular trend.

Significant Status Developments

An interesting development in both two-year and four-year colleges has been the increase in enrollments despite the decrease in reading as a required offering. Rouche and Snow (1978) reported that in 1970, 80 percent of our two-year colleges required some courses, whereas in 1976 the figure had dropped to 29 per cent. The same trend was occurring in four-year institutions. In other words, students were entering reading courses without being required to do so. This movement can be attributed to the counselling-self-concept development that had taken place in college reading.

One apparent factor in the "elevation" of reading programs in all types of institutions was the awarding of academic credit. Rouche and Snow (1978) reported that credit was granted in 78 per cent of today's two-year colleges and 50 per cent in senior colleges. Judd (1973) surveyed the success factors in two-year college programs, concluding that the single biggest factor contributing toward enrollment was the granting of full credit. By giving credit the colleges were confirming that reading courses have value.

Current State of Reading Programs

Unlike early days, college reading programs, generally, are firmly entrenched within our nation's colleges and universities. These programs vary in format, content, methods, and materials. All, however, have characteristics in common. Nearly all use standardized tests for selection, placement, and evaluation. All, generally, focus on improving comprehension and rate. And all may include some intensive vocabulary work.

In most programs, textbook reading skills and study skills are included in reading improvement courses. The typical format for reading workbooks is paced practice with questions to measure understanding. Materials for two-year colleges tend to be easier, although they emphasize the same skills. Modules for practicing subskills in reading are quite popular. Many of the modules are accompanied by tape cassettes that give the student explicit directions.

Reading laboratories in all types of colleges are equipped with devices that purport to increase speed. Pacers, tachistoscopes, and other hardware are found in these reading centers. The self-paced laboratory is the order of the day.

Stigmas generally have disappeared from all college reading programs. Reading, for the most part, is now considered an integral component of the total college program. Research does not point up any "best" reading program. But there are "good" reading programs in many places.

Evaluation of Reading Programs

We have experienced an unprecedented growth of college reading programs that in many cases were established at a rate far greater than staff could be trained to teach and administer them. Reading teachers have wrestled with the issue of program evaluation for the past 25 years. Eller (1956) called for the evaluation of programs but did not specify any procedures for such evaluations.

That colleges are in need of program evaluation was expressed in 1975 by Ball and Anderson. They found that most government departments and private industrial and commercial enterprises were receiving some sort of evaluation but that colleges rarely indulged in formal program evaluation. Hodgkinson and others (n.d.) in a survey of 375 colleges and universities rated as having innovative, instructional programs found additional evidence that rigorous, analytical evaluation procedures are infrequently institutionalized at the college level--even when some sort of evaluation is required as a condition for program funding.

The major function of program evaluation is to provide information for decision makers. The question becomes how this information is gathered and treated. Maxwell (1979) distinguishes between sophisticated, statistically techniqued "hard" evaluation and the less rigorous, opinion laden evaluation of the "soft" variety. Both types have their merits. Hard evaluation may miss the essence of a program's impact, ignore the variables that currently available measures cannot assess adequately, and are mechanistic, basing conclusions on matter other than intelligent judgments. Both hard and soft evaluations have critics as well as praisers. Regardless of the evaluation approach, without such information, the worth, as well as the future, of such programs can be in doubt.

Evaluation of reading programs, moreso than other college programs, has received increased attention because of accountability studies demanded by educational critics. Rouche and Snow (1978) reported that two-year colleges engage in more evaluation efforts than senior colleges. Eighty-five percent of two-year colleges and 67 per cent of four-year institutions have some sort of evaluation. The methods used were not greatly different. These largely involved pre-test and post-test score differences, retention, grade point averages, opinion surveys and follow-up studies.

Marks of Successful Programs

In this brief history of college-adult reading programs, I have presented the main findings of research efforts on this crucial subject. From practitioners in the field who have shared their thoughts and suggestions, I can conclude that three basic ingredients are present in successful programs:

(1) Quality Reading Teachers

To increase the probability of

making a program work, highly competent teachers are needed. Interest is not enough. To be an effective change agent, one must possess not only diagnostic and conceptual knowledge but technical skills in the creation of a learning environment. Through individualized instruction, the teacher produces a shift toward locus of control in students--helps students to become more self-directed and responsible.

It was of interest to note that improvement of teacher quality and improvement of program offerings have gone hand in hand. Schnell (1974) in a national sampling of community college reading teachers, considered to be representative of two-year college reading teachers, found that 99 per cent possessed the MA or higher degree of which 18 per cent had earned doctorates. The average teacher had at least eight years of experience, and over one-half had more than 25 graduate hours in reading. Research indicated that high risk students can learn when they are provided with caring and competent teachers, non-traditional methods, and well thought out programs. The teacher is the key.

(2) Presence of Supportive Services

The teacher, as the manager of learning, needs assistance from all of his colleagues. Administrators have their coordinating and leadership roles, counselors their consultation and training, and students their cooperation and active learning role.

It is crucial that college administrators recognize the need for such a program or there can be none.

College counselling support alone has a great impact on a reading program. Counselling skills help instructors, and instructional expertise helps counselors. The role of the counselor in the improvement of reading is more indirect. He does not presume to give reading teachers suggestions for teaching reading. Instead, he may be able to remove blocks to reading efficiency through helping students solve personality, social, and other problems. Rouche and Snow (1978) reported that 50 per cent of two-year colleges and 31 per cent of four-year institutions have counselors assigned to the reading program.

By recognizing their reciprocal relationships, specialists in these two fields contribute to the improvement of reading and the personal development of all the college students they serve.

(3) Systematic Evaluation

The most successful college reading programs are generally those that evaluate themselves. They base their evaluations on pretest and posttest assessments, student attitude and self-concept changes. By continuous evaluation and dissemination of results, one can plan for change in a manner that enhances control over the components of success. Maxwell (1979) concludes that program evaluation is an important facilitator in decision making. Without evaluation, we are simply "flying blind."

SELECTED BIBLIOGRAPHY

Anderson, Clarence, "Establishing a Reading Center in a Community College--The Flint, Michigan, Individualized Program." College and Adult Reading, 5th Yearbook of the North Central Reading Association, 1968, 160-164.

Anderson, Clarence. "A Description of the Flint Community Junior College Reading Program." ERIC Clearing House for Junior Colleges, Powell Library, University of California, Los Angeles, 1969.

Anderson, Clarence, et al. "Reading Progress: A Bi-Racial Comparison: A Study of the Reading Achievement of Black and White Students at Flint Community Junior College." ERIC Clearing House for Junior Colleges, Powell Library, University of California, Los Angeles, 1970

Anderson, Clarence. "Problems of Individualization." Reading: The Right to Participate, 20th Yearbook of the National Reading Conference, 1971, 211-214.

Anderson, Clarence. "A Study of Accountability in the Community College Reading Program." Programs and Practices in College Reading, Vol. II, 22nd Yearbook of the National Reading Conference, 1972. 7-11.

Anderson, Clarence, et al. "The Realities of Teaching Reading at a Community College." Interaction: Research and Practice in College-Adult Reading, 23rd Yearbook of the National Reading Conference, 1974, 261-264

Anderson, Clarence. "Reading in Management Training, A C Spark Plug Division, General Motors Corporation--Current Approach to Assessment." 1978. (Unpublished paper)

Ball, S., and Anderson, S.B. Practices in Program Evaluation: A Survey and Some Case Studies. Princeton: Educational Testing Service, 1975.

Berger, Allen. "A Comparative Study of Reading Improvement Programs in Industry and Education in the United States and Canada." COLLEGE AND ADULT READING, 6th Yearbook of the North Central Reading Association, 1971, 14-37.

Bleismer, Emery. "1972 Review of Research on College-Adult Reading." Diversity in Mature Reading: Theory and Research, 22nd Yearbook of the National Reading Conference, Vol. I, 1973, 21-61.

Brubacher, J.S. and Willis, R. Higher Education in Transition: A History of American Colleges and Universities 1963-1976, (3rd ed.) New York: Harper and Row, 1976.

Causey, Oscar. "College Reading Programs in the Nation." Exploring the Goals of College Reading Programs, 5th Yearbook of the Southwest Reading Conference for Colleges and Universities, 1955, 135-137.

Cross, K.P. Accent on Learning: Improving Instruction and Reshaping the Curriculum. San Francisco: Jossey-Bass, 1976, p. 24.

Eller, William. "Evaluating Achievement in College and Adult reading Programs." College-Adult Reading Instruction, Newark, Delaware: International Reading Association, 1964, 100-113.

Hodgkinson, H.L., et.al. "Current Evaluation Practices in Innovative Colleges and Universities." Draft. Berkeley: Center for Research and Development in Higher Education, University of California, n.d.

Huey, Edmund. The Psychology and Pedagogy of Reading. New York: Macmillan Company, 1910, p. 6.

Jackson, Boyd. "Counselling and Reading, Their Interrelationship." College and Adult Reading, 2nd Yearbook of the North Central Reading Association, 1963, 11-24.

Johnson, John E. "The Decline of Industrial Reading Instruction: Lessons for the Reading Profession." Diversity in Mature Reading: Theory and Research, 22nd Yearbook of the National Reading Conference, Vol. I, 1973, 238-243.

Judd, Dorothy. "Survey Ranked Enrollment Success Factors for Two-Year College Reading Programs." Montgomery: Troy State University, 1973.

Maxwell, Martha. Improving Student Learning Skills. San Francisco: Jossey-Bass, 1979, 445-457.

McConihe, Esther. "The Shifting Scene in Reading Training at the College Level." Junior College and Adult Reading Programs: Expanding Fields, 16th Yearbook of the National Reading Conference, 1967, 86-91.

Miller, Justin. "Trends in Adult Reading." Junior College and Adult Reading Programs: Expanding Fields,16th Yearbook of the National Reading Conference, 1967,92-98.

Parr, Frank. "The Extent of Remedial Reading Work in State Universities in the United States." School and Society. 1930,31, pp. 547-548.

Patterson, Harry. "The Status of Reading Improvement Programs in Industry." Proceedings of the College Reading Association, Vol. VI, 1965, 168-170.

Raygor, Alton. "Individualizing a College Reading Program." Reading and Inquiry, Newark, Delaware: International Reading Association, 1965, 168-170.

Roueche, J.E., and Mink, O.G. The Impact of Instruction and Counseling on High Risk Youth: Final Report. Austin: University of Texas, Community College Leadership Program, 1976, 102.

Roueche, J.E., and Snow, J.J. Overcoming Learning Problems. San Francisco: Jossey-Bass, 1978.

Schnell, Thomas R. "The Community College Reading Teacher: A Profile." Journal of Reading, October 1974, Vol. 18, 8-11.

Strang, Ruth. "The Improvement of Reading in College." The English Journal,1937, Vol. 26, 548-559.

Summerfeld, Roy. "Problems in Evaluating College Reading Programs." Evaluating College Reading Programs, 4th Yearbook of the Southwest Reading Conference for Colleges and Universities, 1955, 17-27.

Traxler, Arthur. "The Freshman Curriculum and Methods of Teaching." From High School to College, NEA Research Bulletin No. 2, 1938, Vol. 16, pp. 89-94.

About Creativity and Study Skills: Some Observations and Thoughts

Mark E. Thompson
Adjunct Professor of Higher Education
George Washington University
Washington, D.C.

ABSTRACT

Creativity is a vague term used to explain certain unique abilities, insights, and sensitivities displayed by students and teachers. This paper examines the concept of creativity through the identification of traits and characteristics found in the so-called creative personality. An attempt is made to explain how the concept of creativity might be useful for reading and study skills specialists. Numerous references have been made to the concept of creativity without much specific knowledge of how the creative process may be identified and used by professional educators. Reading and study skills professionals might be interested in understanding more about the creative process and how it could be utilized with underdeveloped students.

Creativity, as a term used to explain human activity, has many meanings. One interpretation found in the Dictionary of the Social Sciences (Reading, 1977) explains creativity as the ability to be imaginative and original in the handling of words, ideas, and materials. Will Durant (1978) said the most essential thing in the universe is creative power. Aldous Huxley (1929, p. 223) said, "Creative work, of however humble a kind, is the source of man's most solid, least transitory happiness." Respected scholars such as Ellis Paul Torrance, Donald W. MacKinnon, Sarnoff A. Mednick, Paul Heist, Philip Wesley Jackson and Joy Paul Guilford have studied creativity, and their findings will be briefly reviewed.

In 1950, J. P. Guilford made a presdential address on "Creativity" to the American Psychological Association. This address stimulated interest in creativity, and during the late 1950's and early 1960's research on creativity for education began to appear in print. "Almost without exception, the conclusions seemed to be that those with creative potential are neglected, if not discriminated against, at all levels of American education" (MacKinnon, 1968, p. 149). For Professor Guilford, divergent thinking is one of the most important ingredients of creativity (Guilford, 1957 and 1959). Three significant characteristics of divergent thinking are flexibility, originality, and fluency; or the ability to produce rapidly a succession of ideas that meet some requirements (Arieti, 1976).

E. Paul Torrance has been involved in the study of creativity for the past 25 years - its nature, measurement, and training. Torrance has concluded that many kinds of talent, including creative talent, exist in most populations at any given time. As a contribution to education, Torrance has attempted to help teachers identify and promote creativity in the classroom. Some observable signs of creative behavior in the classroom, according to Torrance, are:

- Intense absorption in listening, observing, doing.
- Intense animation and physical involvement.
- Challenging ideas of authorities.
- Checking many sources of information.
- Taking a close look at things.
- Eagerly telling others about one's discoveries.
- Continuing a creative activity after the scheduled time for quitting.

- Showing relationships among apparently unrelated ideas.
- Following through on ideas set in motion.
- Manifesting curiosity, wanting to know, digging deeper.
- Guessing or predicting outcomes and then testing them.
- Honestly and intensely searching for the truth.
- Resisting distractions.
- Losing awareness of time.
- Penetrating observations and questions.
- Seeking alternatives and exploring new possibilities (Torrance, 1971).

Torrance (1960) found a weak relationship between creative thinking and generalized ability as measured by intelligence tests (Getzels and Jackson, 1962, also found this weak relationship). Certain childlike (usually called childish) mental operations are demonstrably essential to creativity, among them playfulness, wishfulness, spontaneity, approximation, and free-floating openness of mind. In summarizing some of his research, Torrance said the most exciting insight was that different kinds of students learn best when given opportunities to learn in ways best suited to their motivations and abilities. "Whenever teachers change their ways of teaching in significant ways, a different group of learners become the stars of 'high achievers'" (Torrance, 1967, p.88).

Donald W. MacKinnon, while conducting research at the Institute of Personality Assessment and Research within the University of California at Berkeley, has identified the creative person as:

relatively uninterested in small details, or in facts for their own sake, and more concerned with their meanings and implications, possessed of considerable cognitive flexibility, verbally skillful, interested in communicating with others and accurate in so doing, intellectually curious, and relatively disinterested in policing either their own impulses and images or those of others (MacKinnon, 1967). MacKinnon also said one of the most salient characteristics of the creative person is his courage. "Since the creative person is not preoccupied with the impression he makes on others, and is not overly concerned with their opinion of him, he is freer than most to be himself" (MacKinnon, 1967, p. 27).

In 1960, MacKinnon had published an article titled, "The Highly Effective Individual," and he conceived of two variables from numerous sources as being central and determinative of the highly effective individual:

1. Emotional stability or personal soundness.
2. Creativity of thought and action.

MacKinnon also found that creative people not only experience more anxiety, they also have stronger egos and have a perceptual preference for the complex and asymmetrical; they prefer the richness of the disordered to the stark barrenness of the simple and show a preference for intuition. "In all the groups we have studied we have found that self-image and ego-ideal are of crucial importance in determining the level of creativeness with which a person lives his life and practices his profession..." (MacKinnon, 1967, p. 24).

In regard to education, MacKinnon said, "The concept of educating for creativity necessitates our thinking of it not as a fixed trait of personality but as something that changes over time, waxing and waning, being facilitated by some life circumstances and situations and inhibited by others" (MacKinnon, 1968, p. 150). Study skills professionals are most certainly interested in promoting those circumstances that are related to constructive supportive approaches. Often it is a creative challenge for the study skills teacher to find the best approach for each student.

Paul Heist (1967 and 1968) has identified the creative person as: independent, innovative, flexible, with a highly developed sense of the theoretical and the esthetic, and exercising discipline only when he considers it necessary. Philip Wesley Jackson and Samual Messick (1967) found at the level of everyday experience that creative expression of the highest quality tends to come from people who limit their efforts to a single mode of expression. The professional writer, researcher, singer, actor, and educator (reading and study skills specialist) might be good examples. Sarnoff A. Mednick (1962) introduces the concept of usefulness within the dimension of creativity, and this is most important for educators and students. Mednick maintains that the answer 7,363,474 to the question, "How much is 12 and 12?" is original but not creative, because it is not useful within accepted mathematical conventions.

Nevitt Sanford studied the research accomplished by MacKinnon that indicates most creative people are distinguished from less creative ones by greater flexibility of thinking, breath of perspective, openness to experience, freedom of impulse, breadth of interest, autonomy, and integrity. "The argument from this is that, in general, the creative person is above all a highly-developed person, and that educational programs can have an effect on such development in college" (Sanford, 1967, p. 204). In the late 1950's Sanford was touring Eastern Europe, and he said, "When in Russia I suggested to various Soviet professionals and officials that as the living standard in their country rose, and as long as the heavy emphasis on education continued, young people would be increasingly disaffected and deviant. (And, of course, creative, though I didn't mention this.)" (Sanford, 1968, p. 188-89)

Perhaps the nationwide strikes and demands for free labor unions in Communist controlled Poland during August of 1980 is an example of what Sanford suspected would happen. Recent Soviet educational literature gives an emphasis to the notion of creativity and is not hidden: "What does the quality of professional training of a specialist mean? The answer would seem clear: a specialist must know more, his knowledge must be deeper and more lasting, and his outlook must be broader" (Beliaev, 1976, p. 89). The creative element could be a hidden and unknown threat for the so-called Communist block countries.

But how can creativity flourish? In 1927 Joseph Wallas provided an early description of four main steps in the creative process: preparation, incubation, illumination, and verification. These primary steps have been expanded in various ways. A popular modification of this process developed by Alex F. Osburn in 1939 is what he called brainstorming (Osburn, 1957). Silvano Arieti (1976), a practicing psychiatrist and psychoanalyst, provides a good summary of the major theories of creativity development along with other insights, some quite complex, in his book, Creativity: The Magic Synthesis.

Jack A. Chambers completed a study for the National Center for Educational Research and Development in 1972 titled "College Teachers: Their Effect on Creativity of Students." Chambers indicated introversion, dominance, and self-sufficiency as being associated with creativity for teachers and researchers. He said there are clear-cut behavioral patterns that differentiate teachers who facilitate creative development from those who hinder it. According to Chambers' research, encouragement through individual contact is found to be the most important aspect of student-teacher relationships affecting creativity. Creativity seems to be enhanced by a climate of indulgence, safety, friendliness, and cooperation (Dentler, 1964). Robert Nisbet (1975) warns that we may be losing our creative drives.

Creative students may find it most difficult to conform within institutional settings. "...there are indications that high creativity may be associated with unusual degrees of introversion and with certain kinds of high anxiety, as well as with flexibilities of imagination that are quite disabling in regard to high efficiency and freedom from oscillation in routine performances" (Cattell and Butcher, 1968, p. 272).

Creatives tend to make deviant scores on the Minnesota Multiphasic Personality Inventory; this is reflective of the complexity of personality, candor, lack of defensiveness, and openness to experience and not a genuine personality distortion (Ausubel, 1968). "Unconventional people are likely to give unconventional responses to diagnostic test items and thus obtain scores indicating the presence of psychopathology" (Bereiter and Freedman, 1962, p. 577). It has been found that creative professionals (scientists, architects, and novelists) were prone to give unusual responses to word association tests and that unusualness of mental association was one of the best indices of an individual's originality in professional work (Hudson, 1966).

The close relationship between mental illness and creativity has been well documented (George Pickering's Creative Malady, 1974, is a good example). VanGogh at the height of his career cut off his ear, then committed suicide; he was a schizophrenic. Many who achieve distinction are hypomanics with mood swings from one of energy, exuberance and confidence, to one of the reverse. "Freud was an example. Such people are quite sane, and, as long as circumstances do not press too hard, are in no danger and often achieve great things...Plato thought there were two forms of delirium --insanity and inspiration." (Pickering, 1974, p. 26 and 285).

The identification and study of talented students accomplished by Wallach and Wing (1968) gives emphasis to self-initiated activities. "As soon as one looks outside the classroom for evidence of talented accomplishments or attainments, rather than simply looking within the classroom at academic achievement, one finds the student's general intelligence status singularly unrevealing as to who is more likely to exhibit the superior performances. Instead, the clues are provided by information about the ideational resources of the person - something quite different from intelligence" (Wallach and Wing, 1969, p. 127). There seems to be compelling evidence for predicting future creative behavior from past creative behavior (Holland and Nichols, 1964; Richards, Holland and Lutz, 1967, Hocevar, 1979).

Reading and study skills teachers might consider their own behavior and the behavior of their students from the creative perspective. Knowing when and how to administer professional knowledge is part of an effective creative task. Some research indicates socially and emotionally maladjusted students often have higher creative potential than socially emotionally adjusted students (Finch, 1977). But it is most difficult to identify the proper educational strategies for creative people.

Teaching a skill requires technical knowledge, but students frequently reject the technical as being inhuman and alien to their unique needs. The techniques of reading and study skills may indeed be rejected by creative students. It takes a resourceful person to teach and promote creativity all at the same time.

References

Arieti, S. *Creativity: The Magic Synthesis*. New York: Basic Books, 1976.

Ausubel, D.P. *Educational Psychology: A Cognitive View*. New York: Holt Rinehart and Winston, Inc., 1968.

Beliaev, S.T. "A Specialist Must Be Creative." *Soviet Education*, 1976, *19*(2), 89-94.

Bereiter, C. and Freedman, M.B. "Fields of Study and the People in Them" in *The American College* ed. by N. Sanford. New York: John Wiley and Sons, 1962.

Cattell, R. C. and Butcher, H. J. *The Prediction of Achievement and Creativity*. New York: The Bobbs-Merrill Company, 1968.

Chambers, J. A. "College Teachers: Their Effect on Creativity of Students." ERIC, ED 060 822, 1972.

Dentler, R. A. and Mackler, B. "Originality: Some Social and Personal Determinants." *Behavioral Science*, 1964, *9*, 1-7.

Durant, W. quoted in "Durants on History: From the Ages, With Love" by P. Proctor. Parade: *The Sunday Newspaper Magazine*, August 6, 1978, 12.

Finch, J. M. "A Comparison of Creativity In Disturbed Delinquent, Accelerated, and Normal Children." *The Journal of Creative Behavior*, 1977, *11*(3), 211.

Getzels, J. W. and Jackson, P. W. *Creativity and Intelligence*. New York: John Wiley and Sons, 1962.

Guilford, J. P. "Traits of Creativity" in *Creativity and Its Cultivation* ed. by H. H. Anderson. New York: Harper and Row, 1959.

Guilford, J. P. "Creative Ability in in the Arts." *Psychological Review*, 1957, *64*, 110-118.

Heist, P. "Education for Creativity, A Modern Myth?." ERIC, ED 025 999, 1967.

Heist, P., ed. *The Creative College Student: An Unmet Challenge.* San Francisco: Jossey-Bass, Inc., 1968.

Hocevar, D. "Measurement of Creativity: Review and Critique." ERIC, ED 175 916, 1979

Holland, J. L. and Nichols, R. "Prediction of Academic and Extra-Curricular Achievement in College." *Journal of Educational Psychology*, 1964, *55*, 55-65.

Hudson, L. *Contrary Imaginations*: *A Psychological Study of the Young Student*. New York: Schocken Books, 1966.

Huxley, A. quoted (1929) in *Aldous Huxley: A Biography* by S. Bedford. New York: Alfred A. Knopf, 1973.

Jackson, P.W. and Messick, S. "The Person, the Product, and the Response: Conceptual Problems in the Assessment of Creativity" in *Creativity and Learning* ed. by J. Kagan. Boston: Beacon Press, 1967.

MacKinnon, D.W. "The Highly Effective Individual." *Teachers College Record*, 1960, *61*(7), 367-378.

MacKinnon, D.W. "The Study of Creative Persons: A Method and Some Results" in *Creativity and Learning* ed by J. Kagan. Boston: Beacon Press, 1967.

MacKinnon, D.W. "Educating for Creativity: A Modern Myth?" in *The Creative College Student: An Unmet Challenge* ed. by P. Heist. San Francisco: Jossey-Bass, Inc., 1968

Mednick, S. A. "The Associative Basis of the Creative Process." *Psychological Review*, 1962, *69*, 220 232.

Nisbet, R. *Twilight of Authority*. New York: Oxford University Press, 1975.

Osburn, A. F. *Principles and Procedures of Creative Thinking*. New York: Scribner, 1957.

Pickering, G. *Creative Malady*. New York: Dell Publishing Company, 1974.

Reading, H. F. *A Dictionary of the Social Sciences*. Boston: Routledge and Kagan Paul, 1977.

Richards, J.M., Holland, J.L. and Lutz, S.W. "Prediction of Student Accomplishment in College." Journal of Educational Psychology, 1967, 58 343-355.

Sanford, N. "The Human Problems Institute and General Education" in Creativity and Learning ed. by J. Kagan. Boston: Beacon Press, 1967.

Sanford, N. "Personality Development and Creativity In The Soviet Union" in The Creative College Student: An Unmet Challenge ed. by P. Heist. San Francisco: Jossey-Bass, Inc. 1968.

Torrance, E.P. "Explorations in Creative Thinking." Education, 1960, 81, 216-220.

Torrance, E.P. "Scientific Views of Creativity and Factors Affecting its Growth" in Creativity and Learning ed. by J. Kagan. Boston: Beacon Press, 1967.

Torrance, E.P. "Nurture of Creative Talents" in Training Creative Thinking ed. by G.A. Davis and J. A. Scott. New York: Holt, Rinehart, and Winston, Inc., 1971.

Wallach, M. A. and Wing, C.W. The Talented Student: A Validation of the Creativity-Intelligence Distinction. New York: Holt, Rinehart, and Winston, Inc., 1969.

Wallas, J. The Art of Thought. New York: Harcourt Brace, 1926.

Recent Changes in Student Life Styles: Effect on Reading

Dale M. Brethower
Western Michigan University

ABSTRACT

Changes in student life styles may be important to campus life, but probably not because of direct effects on reading. Declines in aptitude scores and in reading and writing skills are probably more relevant than life style changes. Even these represent changes in numbers of students with deficiencies rather than qualitative changes in the nature of the deficiencies. Brethower calls attention to the role of reading experts in the solution of certain enduring problems. They can help students find constructive alternatives to self-defeating notions about reading; they can help colleagues to find constructive alternatives to self- and student-defeating practices. Drifting away from fundamentals does not appear a proper response to changes in student life style.

The topic of the effect of student life style on reading is an important one. The importance arises, not from the fact that there is a major effect, but from the fact that changes in life style can distract us from attending to more salient variables. Changes in student life style are significant and worthy of attention in terms of their broad impact on campus life and learning. Life style changes might well reduce the probability that students will elect to read unassigned or optional material; however, I'm not sure the probability has ever been comfortingly high--except for students such as you and I who go on to become faculty members.

My credentials for speaking about student life style are those of the participant observer rather than the objective scholar. I'll share some of my experiences and observations with you so that you may test their validity against your own observations.

In October, 1980, there was an editorial in a local newspaper chastising the good people of Kalamazoo for not coming out to fill the stadium in support of Western Michigan University's football team. (For the information of persons not avid fans of the WMU Broncos, the team had been engaging in the not sufficiently common practice of winning football games. Local sportswriters had discussed seriously in their columns the possibility that the Broncos might even win over the MSU Spartans). The editorial writer opined that it was a bad thing that more of the citizenry didn't come out to cheer the team on to victory.

A citizen replied in a letter to the editor: Supporting the team was one thing but having to associate with the students was quite another story. The citizen went on to describe objectionable aspects of sharing the stadium with students. Instead of the way things were in my day and earlier when we wore tweeds, took discreet nips now and again from pocket flasks and shouted out with "Fight Fiercely"! and other partisan exhortations, it seems students nowadays wear grubbies, guzzle Boone's Farm wine, shout obscenities and do other naughty things. The citizen didn't approve of that aspect of student life style.

Another life style change is reflected in block parties. Students at Western are given to having block parties, especially late in the spring and early in the fall. They apparently have much better advertising (or perhaps better refreshments) than we do at block parties in my neighborhood. Thousands of students attend. Instead of serving coffee and cakes as a signal that the party is about to be over, the students use a catering service. The local police come announcing "The party is over"! with bull horns, serving up tear gas to late hangers on, and providing vans to transport the more energetic travelers to special overnight lodgings. It's all really quite different than the block parties we hold now or the panty raids we held in student days gone by. Students indeed have a different style.

Their style, as always, is in transition. The after hours style of students reported in the newspapers differs considerably from what I see in the classroom. Dress and apparent hygiene have changed--I say for the better. Perhaps that's partly because many of the students in my undergraduate class in industrial psychology are business majors but I also see a similar trend in our psychology majors.

Business students at Western, by the way, now outnumber arts and science students. There has been a slow, steady multi-year decline in arts and sciences majors and a similar slow and steady increase in business majors. Both trends appear to be continuing and are certainly consistent with changes in data on interests of high school seniors over the past decade. According to our admissions office, the picture in Michigan is similar to that elsewhere in the nation. High school seniors considering college are now more frequently vocationally oriented, especially toward business and commerce.

Students now are also more likely to seek financial aid, to be a bit older, to be less dependent on their families, and to be more likely to be married or actively practicing up for some such relationship.

Students today are surely different than in the past. They are neither the war hardened and matured students of the late forties nor the war bruised and confused of the early seventies. They are not the activist of the sixties or the apathetic students of the fifties. On the other hand, I'm surer that we can agree with these characterizations-by-decade of students than I am that the characterizations are meaningful.

As a student in the fifties, I remember resenting the label "apathetic". Perhaps if I'd resented it more I'd have punched somebody out about it, or spray painted "Down with epithets about apathy" on the dean's door. Friends of mine sitting in to integrate restaurants in the fifties didn't grab headlines but they were more activist than many of the followers of the parade in the sixties. I also knew students in the sixties whose approach to activism was to go quietly to class. They wanted to learn what they could that would enable them to deal with some of the problems others were complaining so vociferously about. According to the media, going to class regularly is a sign of apathy, a bit of academic reportage I've never fully endorsed.

I believe global characterizations of students are simply stereotypes without much substance, and with potentially harmful side effects similar to those associated with stereotypes about dumb blonds, stupid jocks, absent minded professors, greedy businessmen, crooked politicians, dedicated doctors, and superior races.

But some of the generalizations about today's students are worthy of consideration, as long as we treat them as generalizations about the population rather than facts about individuals. There has been a decline in general academic skills.

The decline in aptitude scores is well documented, and shows some signs of having bottomed out. The perceived decline in writing skills, reading ability and computational skills is surely real although we would do well to recall Anderson's reminder that President Tappan of the University of Michigan was already bemoaning that decline back in 1852. The increase in college grade averages is real. The increase in grades averages is surely a sign of grade inflation in most classes around the university. (It's a sign of superior teaching in your classes and mine, but in most classes ....)

The increase in average age of students is real and it's true that one's student role must sometimes take on a lower priority when one has a spouse, children, a job, car and house payments and the like.

But what do we make of such trends?

What is the importance and what are the implications for us as faculty and as reading specialists?

My guess is that the trends indicate quantity changes. We probably have proportionately more students now who read badly, write badly, and/or view being a student as not very important in their lives. We've always had some students like that and now, perhaps, we have more. We also have many students who write well, read well, take their learning seriously, and do it well. Not enough of them enroll in my classes but I am sure they are around somewhere.

We've always had many students who have had difficulty dealing with the stresses of college life. We've always (at least during the twenty years of my experience) had students for whom the stresses of being head of the family exacerbated the other stresses. We've always had students for whom stresses associated with drug use and abuse has affected their school work. We've always had students who are hampered by test anxiety, poor study habits, procrastination, or frequent opportunities to go partying with less scholarly friends.

We've always had students whose development of improved reading, writing, or learning skills was hampered by false and harmful beliefs about reading, writing, and learning. Some of those erroneous beliefs or misconceptions are shared, I'm afraid, by faculty members and by reading experts so, before I list them, let me urge that no one take offense. (Take exception, if you wish, so that we can clarify the issue and look to the evidence to correct the misconception, be it my misconception or yours).

Some of the misconceptions of current and past generations of students follow:

1. Reading more slowly and carefully is the technique of choice for improving comprehension. (If you read very slowly you can barely comprehend. If something lacks the information you need for comprehension, reading it slowly isn't going to help. Reading slowly can reduce the rate of comprehension so much that the reader goes to sleep, etc.).
2. Some reading material is inherently interesting; other material is inherently dull. (Interest and bordom are responses to material not characteristics of material itself. Changing the way one responds to material changes one's interest--but it doesn't change the material. At most, interest is a result of an interaction between reader and material rather than a property of materials).
3. Some reading material is hard to read; other material is easy to read. (How hard or how easy something is refers to the skill level of the student in relation to the material, not to the material. Material hard to read using one technique can be easy to read using another technique).
4. Reading is a receptive not a creative process. (The squiggles on the page do not contain information which leaps from page to eye to brain; the squiggles stay on the page. The reader "creates" responses that bear loose but important relations to the squiggles).

There are other misconceptions I could list--perhaps I should call them "dangerous half-truths" since they are not totally fanciful. For example, I could list "It takes a long time and/or hard work to make major improvements in one's reading, writing, or learning skills". But the ones listed are enough for the purpose.

The purpose is to argue that the changes we perceive in student life style, while important, should not distract us from seeing the non-changes, the enduring characteristics of students that are more important to our task of helping them learn. The fact, if it is a fact, that there are relatively more students now who have serious academic deficiencies doesn't mean that we should despair or that we should gleefully expand our remedial programs. Perhaps we should review the old K-12 notion of "Every teacher a reading teacher", at least to the extent of providing leadership in helping faculties cope with the problem.

Members of groups such as the North Central Reading Association have a lot to offer. There are many things we could show our colleagues in teaching. There are many simple things they can do to better teach their areas and do it so as to enhance the reading, writing, and learning skills of their students. Leadership and practical and nondemeaning techniques are needed to help us avoid continuing several self-defeating patterns:

1. Throwing in the towel: not assigning term papers and not using essay exams because they are too painful to read and too laborious to correct.

2. Using text books which have been made "easy to read" by removing the substantive content.
3. Allowing grades to get higher (when performance doesn't get better) because we don't want to discourage someone or because we don't want to lose students or because we don't want to get into hassles about grades.

Such practices are terribly self-defeating, a disservice to ourselves, our educational institutions, and our society in general.

Consider the problems unwary publishers (and textbook selectors) can get into by applying readability formuli to texts. Such formuli tend to favor use of short words and short sentences. Commendable, except that technical terminology tends to be polysyllablic and complex relationships are a real chore to set down in short sentences. (Complex sentences are not inherently hard to comprehend. "This is the house that Jack built..." becomes a very long, very comprehensible sentence)

Readability formuli applied to texts can help to eliminate unnecessary technical jargon when plain English will do the job better. They can help eliminate the complex and incomprehensible sentence populating ineptly written technical material. By my impression, gleaned from working with several "readable" texts, is that the substantive content has also been targeted for elimination.

When content is sacrificed in the name of readability, all students are casualties. The good students are deprived of an opportunity to tackle substantive material. So are the poor readers and they are doubly injured. When they try hard to comprehend and fail it confirms their notion (and perhaps their instructor's notion) that they are deficient. But there is no way they could succeed because there is nothing there for them to comprehend! A cruel hoax, inadvertently perpetrated.

Unfortunately, the nature of the reading process makes it difficult for an instructor or publisher to detect the hoax. The instructor, an expert in the content, can make many associations to a few cues in the text. In other words, the instructor can "read into" the text much more than is there. The instructor could almost stare at a blank page and recite the content. Put a few words about content on the page--but not enough substantive content to show what the words mean--and the instructor can read in the rest. The student, lacking the instructor's extensive prior knowledge, cannot duplicate the feat.

We need to be concerned with changes in student life style so that we can become more flexible in our approaches to class scheduling, to course offerings, to the way we respond to students on an individual basis. Responding to them on an individual basis is the key. If we respond to stereotype, we miss individual. If we over re-act to stereotype, we can be distracted from the important.

The changes in life style affect reading; however, drifting away from the fundamentals of our profession is not a proper response to those changes.

Learning Style Inventories: Boon or Boondoggle for College-Adult Reading Programs?

James E. Walker
Northern Illinois University

ABSTRACT

The increased questioning of the use of ability, achievement, and personality instruments gives impetus to consideration of learning style inventories. A brief description of nine inventories is provided as a sample of what is available today for college and adult learners. Since learning styles are not judged as "good" or "bad," and since they provide insights into learners' characteristics, it is suggested that such inventories might readily find acceptance, particularly when the information is shared with the learner.

I had just enrolled in a language school in Mexico when my name was called for testing. As a reading educator, I figured I knew what they were about. I soon found that I was only partially right. With six other students and two staff members, the rapid-fire testing began: repeat after me. A series of words, blurted and blurred, went back and forth around the table with an occasional snicker at the mispronunciations. The ability to learn by hearing was later contrasted by a visual memory test to determine whether we had a modality preference. I was correct in guessing what they were about, but where I was not correct was in the staff's assignment of students to different classes on the basis of preferred way of learning. Every student was exposed to the same, staccato auditory modality lessons, no matter what.

In very recent times, perhaps more has been written about modality strength than in the immediately past generation. Why this attention? What can it tell us that we might not already know? One way to answer these questions is to say first that learning styles deal with the best ways to learn for certain kinds of persons under special conditions.

An advantage to studying learning styles is that such a study tends to be consistent with so much of an emphasis on how individuals learn and on the corollary, individualization of instruction. Kazmierski has pointed out that we usually look at the individual in three foci: ability, achievement, and personality differences (1980). Ability often is considered from the standpoint of IQ with designations of above average, average, and below average. Achievement is typically described in terms of high, average, and low. Grouping and placement of students is often done with these labels in mind. We can talk of acceleration and retention. The third way we look at individuals is in relation to personality designations such as average or deviant. All of these concepts, however, have to do with differences in people.

A concept which does not center on differences is learning style. It does not speak of failure. It does subject all concerned with chances for better instruction. Learning style is a way to describe how a person approaches a learning task. The major difference between this concept and ability, achievement, and personality is that it does not operate on a hierarchical system. There is no notion of average, deviant, retention, and so on. Rather, as Kazmierski has emphasized, learning style is something that operates on a continuum. There is less of a tendency to attach labels to students when we speak of learning styles and cognitive styles.

There are many dimensions of learning styles, according to which researchers you might be reading. There does seem to be some reason to suggest that a good synthesis might be available to us by the end of this decade, given the attention now being paid to this concept. An example of some of the dimensions lies in Jerome Kagan's terms _impulsive_ and _reflective_. An impulsive learner is dependent. This learner would tend to act on hunches with little reflection. This is the sort of person who cannot tolerate a period of silence, maybe like Maria in _The Sound of Music_. This impetuous learner needs a more didactic, teacher-directed method.

The reflective learner, contrarily, is independent and has high standards. There are few symptoms of hyperactivity. For this type learner, an inductive or discovery approach might be best. Obviously, the implications for instruction are legion. In the same classroom, there are bound to be learners representing all kinds of dimensions of learning.

Illustrative Inventories

In a review of the research in preparation for this paper, there were itemized approximately twenty-five learning and cognitive style inventories. As a sample of what is available, information is provided on a few that might be most pertinent to instructors who deal with college and adult students.

1. The Child Rating Form, by Ramirez and Castanada is in checklist format. Older students can rate themselves. The time limit varies. Cognitive style differences referred to as field independent and field sensitive and cultural differences lead to different learning styles. The authors feel that learning style is not permanently fixed, so one can intervene and affect it.
2. Cognitive Style Interest Inventory (Hill), is a self-reporting, rank ordering inventory for elementary through adult levels. The administration time is about 50 minutes. Cognitive style mapping identifies strengths and weaknesses. Style is reflected in how symbols are used, in cultural influences, and in the meaning derived from symbols that are perceived.
3. Inventory of Learning Processes (Schmeck) is a 62-item, true-and-false self-report instrument that takes about 20 minutes to administer. Individuals prefer to engage in activities which range from deep and elaborative to those which are shallow, repetitive, and reiterative.
4. Learning Style Inventory (Canfield & Lafferty) is a self-report, rank-ordering of 30 questions available for junior high to adult level students. The time is approximately 15 minutes. The emphasis on attitudinal and affective dimensions in this instrument helps the instructor to develop materials for entire classes or for individual students.

5. Learning Style Inventory (Kolb) is a self-reporting, rank ordering of four words in each of nine sets. The time suggested is from 5 to 10 minutes. Each of the four words represents the modes of feeling, watching, thinking, and doing. This inventory emphasizes the awareness of one's own style.
6. Paragraph Completion Method (Hunt) calls for a written response to a posed topic for grades 6 through adult. The time is about 20 minutes. This instrument helps to describe students in ways in which they most likely learn and it describes the amount of structure learners need.
7. Productivity Environmental Preference Survey is the adult version of the Learning Style Inventory developed by Dunn, Dunn, and Price. The self-reporting, rank-ordering of 100 items requires about 30 minutes. This instrument is designed to diagnose individual learning characteristics. Different prescriptions are suggested to accommodate various styles.
8. Transaction Ability Inventory developed by Anthony F. Gregorc is a self-reporting, rank-ordering of 4 words in each of 10 sets, appropriate for use for upper junior high through adult levels. This instrument requires only about 5 minutes. Preferences for a particular set constitute a learning style. The author emphasizes matching materials and methods and also stresses nonpreferences to strengthen those areas.

Additional suggestions for perusal of instruments developed for appraising students' learning styles are given below.

9. Learning Modalities Inventory (Papalia) is a self-reporting, ranking of 41 items on a 5-point scale which has subsections on cognitive styles, sensory modes, work habits, personal characteristics, intellectual dependency, and originality.

The various instruments typically provide information on common aspects of learning styles. These elements include structure, motivation and sociological needs, perceptual modes, and thought processing.

Learning style inventories are not intended solely for the use of the instructor. In fact, if we remember the purpose of all serious study programs is to make the learner ultimately an independent learner, it follows that information gleaned from the use of these inventories is to be shared with the learner. On the college level, it is urged that students might analyze their styles and seek professors who might have matching teaching styles. In the event that such matches are not feasible, ways to compensate for differences between student and teacher preferences can be recommended.

Conclusion.

A final word about learning styles is in order. One major advantage for their use is that they start with the whole student, not with isolated parts as is often the case in testing learners at all levels. If learning styles are to be of any real value to us, they must be easily assessed, understandable, and not require that the teacher pour through volumes of data.

Learning styles are not thought of as "good" or "bad," but rather for their usefulness. The categories in the different inventories are elastic enough for a teacher to adapt strategies and plans to meet the needs of students. Perhaps one of the keys to the question of whether or not to use learning style inventories is to keep in mind the admonition: Learner, know thyself. To this end, recent developments in learning style theory and development should be one of the most promising practices in this decade.

REFERENCES

Canfield, A.A. and J.C. Lafferty. Learning Styles Inventory. Detroit: Humanics Media (Liberty Drawer), 1970.

Dunn, R. and K. Dunn. Teaching Students Through Their Individual Learning Styles. Reston, Virginia: Reston Publishing Co., 1978.

Dunn, R. and T. DeBello. "Learning Style Researchers Define Differences Differently," Phi Delta Kappan, 38, 5 (February 1981), pp. 372-375.

Gregorc, A.F. "Learning/Teaching Styles: Their Nature and Effects, " In Student Learning Styles: Diagnosing and Prescribing Programs. J.W. Keefe (Ed.). Reston, Virginia: National Association of Secondary School Principals, 1979, --. 19-26.

Hill, J.E. Personalized Education Programs Utilizing Cognitive Style Mapping. Bloomfield Hills, Michigan: Oakland Community College, 1971.

Hunt, D.E. "Learning Style and Student Needs: An Introduction to Conceptual Level." In Student Learning Styles: Diagnosing and Prescribing Programs, J.W. Keefe (Ed.). Reston, Virginia: Natiional Association of Secondary School Principals, 1979.

Kazmierski, P. "Cognitive Style: A Vital Vial in Reading." A Featured Address to the 24th Annual Conference of the College Reading Association, Baltimore, Maryland, October 30, 1980.

Kolb, D.A. "Disciplinary Inquiry Norms and Student and Student Learning Styles: Diverse Pathways for Growth," In The Modern American College, A. Chickering, (Ed.) San Francisco: Jossey-Bass, 1981.

Papalia, A. "Assessing Students' Learning Styles and Teaching for Individual Differences, : Hispania, 61, 2 (May 1978), pp. 318-322.

Ramirez, M. and A. Castanada. Cultural Democracy, Bicognitive Development, and Education. New York: Academic Press, 1974.

Schmeck, R.R., F. Ribich, and N. Ramaniah. "Development of a Self-Report Inventory for Assessing Individual Differences in Learning Processes, Applied Psychological Measurement, 1, 3 (Summer 1977), pp. 413-431.

Reducing Test Anxiety Effects on Reading Comprehension of College Students

David M. Wark
J. Michael Bennett
Nadine Emerson
Howard Ottenheimer
University of Minnesota

ABSTRACT

When this paper was originally presented at the NCRA meeting in 1980, there were only three students in the experimental group. The results were promising, but the effect of treatment was not clear. Due to the NCRA Publication lag, the paper was not printed. Subsequently the study was replicated by two other counselors (N.E. and H.O.). The complete results were recently published in "Comprehension: Process and Product"; the first yearbook of the American Reading Forum. However, since the project was first presented at NCRA, it only seems fair to offer the most complete version in the yearbook.

This paper reports an attempt to integrate previously used treatment techniques and the author's speculation about cognitive processes under anxiety, to develop and evaluate a treatment technique for anxious college readers.

The concept of test anxiety as defined psychological syndrome is about 20 years old (Sarason, 1972). Since the inception of investigation, there have been several hundred articles reporting the genesis, functioning, and possible treatment of test anxiety. Currently, reliable differences between the high and low anxious student can be demonstrated by 1) Physiological responses (Wark & Walch, 1974); 2) Measures of affective state and trait (Liebert & Morris, 1967; Spielberger & Gorsuch, 1966); and 3) Covert verbal responses (Hollandsworth et. al., 1979). These dimensions, body, emotion and internal talk, have been the basis for varieties of test panic treatment.

One of the earliest validated treatments for test anxiety was the behavioral approach of systematic desensitization (Wolpe, 1969). However, that technique for controlling anxiety, effective on other kinds of phobic responses, proved helpful but insufficient in the case of test anxiety. Test anxious students apparently need to learn not only how to relax, but also how to study more efficiently prior to testing (Mitchell, Hall and Piatkowsha, 1975). Both interventions were important; treatment that stressed one or the other was not as effective as techniques that used both (Allen, 1972). Recently, several cognitive components of test anxiety treatment have been isolated and used in successful therapy.

One, a cognitive - attention based intervention technique, was based on the work of Wine (1977). She pointed out that test anxious students tended to observe their own internal physiological disturbances, rather than attend to the item they were supposed to be answering. By teaching appropriate test-wiseness and attention-focusing techniques, she was able to reduce test anxiety. Still more recently, Meichenbaum (1977) and Goldfried (1980) have drawn attention to the covert internal self-talking that anxious students carry on while they are testing. Therapy is based on teaching students to revise their own internal dialogues.

Until very recently, the notion of test anxiety has not been of much interest to reading researchers working with adults, though there have been several studies of the impact of test anxiety on children's reading comprehension (Wildemuth, 1977). In the past year, however, several studies have focused specifically on the college reader. The first showed that high test anxious students have measurably lower reading comprehension (Wildemuth, 1977). In the past year, however, several studies have focused specifically on the college reader. The first showed that high test anxious students have measurably lower reading comprehension than do relaxed students (Wark, Bennett and Wolinski, 1980). Additional research (Bennett & Wark, 1980) discusses how high anxiety may affect the adult's cognitive processes in reading. Anxious and non-anxious students do about as well on items that require a single fact taken from the paragraph in order to answer the comprehension item. But when compared to their more relaxed classmates, anxious students do much worse when required to integrate material from several different places. Anxious students tend to read in this characteristically limited way wherein details are noted, but overall comprehension is retarded.

This paper reports an attempt to integrate previously used treatment techniques, and the authors' speculations about cognitive processes under anxiety, to develop and evaluate a treatment technique for anxious college readers.

Subjects

The subjects for this study were enrolled in the four fall and winter quarter sections of an Efficient Reading course at a large midwestern university. The course is a popular, elective academic offering presented through the Department of Rhetoric. There were a total of 84 women and 85 men in the classes. About ten per cent were freshmen, the rest ranging from sophomores through graduate students. This group can be thought of as a representative sample of middle-range students in a large state institution. As part of the introductory phase of the class, each student took either Form E or Form F of the Nelson-Denny Reading Test (Brown, Bennett, and Hanna, 1980), and the 16 item form of the Test Anxiety Survey (Sarason, 1958).

Treatment

At the second meeting of the class, a therapist was introduced to the students. He had no prior information about their reading pretest scores. He explained the nature of test anxiety, interpreted the score on the Sarason instrument which the students had taken, and offered to meet in a specific room three times a week for two weeks to conduct a treatment program for test anxiety. Students were informed that the program was experimental, but that it should have some impact on their ability to comprehend material used in the Efficient Reading class. Any volunteers were asked to commit themselves to attend all six sessions. Students who signed up for one of the available hours became the experimental group.

Students who were motivated for help, but were not free at the particular hours that treatment was offered, were asked to sign up and indicate when they could participate. The therapist suggested that if possible other sections of the treatment program would be opened. The students who signed up for the "possible" section constituted the motivated-but-not-treated control group.

The motivated volunteers whose schedule allowed time (N=8) received the following treatment:

Day 1 - Share experiences in the group to develop some support and rapport, learn the rationale for the treatment, practice relaxed diaphram breathing, and begin progressive relaxation.

Day 2 - Review diaphram breathing, develop whole body cue controlled relaxation. The students were presented with a standard reading anxiety hierarchy, to be used for systematic desensitization (Wolpe, 1969). The hierarchy, based on increasingly difficult reading as defined by the Flesch scale, was used by all the subjects. The standard hierarchy is presented in Table 1. However, each subject assigned subjective units of discomfort to the scenes as seemed appropriate, and added items at the top or bottom of the scale if desired.

Day 3 - Relax the whole body. Discuss the rationale for systematic desensitization of reading problems, and do scenes 1 and 2. The criterion was two presentations of ten seconds without anxiety.

TABLE 1

READING ANXIETY HIERARCHY

_____ 1. Reading a comic book because it takes you back to the good times when you were a child.

_____ 2. Reading a pulp magazine like a western or a romance because you want to relax or get away for a while.

_____ 3. Reading an article in a slick magazine like OMNI or REDBOOK because the title catches your interest and you want to know more about it.

_____ 4. Reading the cover article of TIME so you can be more current in your social conversation.

_____ 5. Reading an article in a magazine like ATLANTIC so you can explain your political point of view.

_____ 6. Reading an article in a technical scientific magazine like SCIENCE so you can discuss it in class.

_____ 7. Reading a legal contract before you sign to make a big loan.

Day 4 - Relax, do scenes 3, 4, and 5, discuss the rationale for finding the main idea in a paragraph as a way to counteract anxiety, and do Main Idea exercises (Gilbert, 1966).

Day 5 - Relax, do scenes 6 and 7, review the Main Idea patterns given as homework, and do Reading For Understanding exercises (Thurstone, 1959), including writing down covert comments. The Reading for Understanding materials were used because of one important characteristic of these exercises - that readers must attend carefully to the text, understanding the sense of the total paragraph in order to correctly complete the exercise. Prior research, (Bennett & Wark, 1980) suggests that high anxious students need practice in reflective or "Overall comprehension." The student's covert comments were analyzed to look for negative self-comments and to help students rewrite positive support self-comments for use during test taking.

Day 6 - Discuss the covert comments from Day 5, and develop a self-directing script to counteract negative comments and anxiety. Minimally, the script would contain instructions to A) "Be calm", B) "Breathe from my stomach" and C) "Look for the main idea".

The six hours of treatment were designed to use interventions proven effective in investigations of test anxiety. The first three hours were devoted to relaxation and systematic desensitization for any fear of reading. During the 4th and 5th sessions, students were taught a necessary skill, reading the paragraph as a unit. Traditional test anxiety treatments focused on more general study and test taking skills. But for this research, designed to reduce anxiety effects during reading, there is a specific required skill. In the 6th session the students were introduced to a cognitive intervention: developing their individualized script to integrate previous learning and prompt themselves in anti-anxiety techniques when they take a reading test.

Following the sixth treatment day, all students in the Efficient Reading classes took the Comprehension section of Form C of the Nelson-Denny Reading Test as an in-class exercise. Before administering the test, the instructor reminded the students who had been in the test anxiety treatment to use whatever skills they had learned in the program.

Results

A control group of 8 students volunteered for treatment but were not available during the specified hours. But they were motivated for improvement. Their anxiety scores (M=7.6) indicated they were only slightly more test anxious than the classes as a whole (M=6.7). Because the different sections of the class had taken either the Nelson-Denny Form E or Form F as a pretest, all comprehension raw scores were converted to standard scores for comparison. The control subjects had a pretest (M=.254) slightly higher than the total group. In summary, the control group can be characterized as slightly anxious, competent readers, willing to spend extra time to improve their reading.

There were eight students who had the time available to be in the treatment group. They had a much higher level of anxiety (M-11.25) than the control group. As a point of comparison, students who score at 11 or higher on the Anxiety Test should be considered for special assistance, since anxiety probably reduces their reading comprehension score (Wark and Bennett, in press). Their comprehension standard scores (M=-.475) were in fact well below the class average, confirming their need for special help.

The treatment effectively increased the comprehension scores for motivated test anxious readers in the experimental group, compared to the motivated-but-not treated control group. Initially, the two groups did not differ on the pretest reading scores, *t*(14)=1.036 *p*=.84. The experimental groups increased .573 standard scores, pre to post. This was significantly greater than change for the control group, which in fact dropped .102 standard scores. The difference, reported in table 2, was significant, *t*(14)=2.053 p= .02.

TABLE 2

RESULTS OF READING ANXIETY TREATMENT PLAN

Group	N	ANX	Pre Standard Score	Post Standard Score	Difference Standard Score
Experimental	8	11.25	-.475	.098	.573
Control	8	7.6	.254	.151	-.102

$t(14) = 2.053 \quad P < .02$

Discussion

This study clearly supports the notion that high test anxiety lowers reading comprehension for adults. The data are consistent with prior research on test anxiety in general, and reading testing in particular (Wark, Bennett & Wolinski, 1980). The finding is of some value to the methodology of test anxiety research. External criteria in much previous research has often been highly controlled, but irrelevant, tasks like anagrams. On the other hand, researchers have used changes in grade point average or other important measures contaminated with large amounts of uncontrolled variance. Reading comprehension items seem to offer a mid-range, relevant and interpretable activity.

The treatment program had a positive effect on comprehension. The gain was congruent with other studies involving cue-controlled desensitization (Lent & Russell, 1978), self-instruction (Meichenbaum, 1972) and specific skill training (Wine, 1971). The specific skill in this study was that of "seeing" a whole paragraph, a skill chosen for effectiveness on the basis of its presumed relevance to a model of reading under anxiety.

There was one other treatment variable, so far not mentioned in the literature. At the time of the posttest, the examiner gave a specific reminder to the subjects to use the anti-panic techniques they had learned. Perhaps a lack of such reminders in prior research accounts for the finding that anti-panic treatment tends to be successful in reducing self-reports of anxiety, but not in generalizing to the classroom. The role of positive prompting before testing should be investigated more thoroughly.

The reader will no doubt consider possible biases in the selection of the experimental group. The sample size (N=8) immediately raises questions of reliability and generalizability of the findings. The major disturbance to the design was class time. Of the 16 motivated volunteers, 8 had conflicts at the time established for treatment; 8 did not. There is no reason to believe that class hour choice is a systematic variable. Yet there were non-random differences between the group. The experimental group was more anxious, but that difference would work against finding any positive effect from treatment. The experimental group had a lower, but not significantly different, pretest reading score. Again, that would mitigate against positive results. The fact that changes took place for even 8 students speaks to the robustness of the treatment effects. It seems reasonable to generalize such findings to other high anxious stuents who are motivated for change.

BIBLIOGRAPHY

Allen, G.J. The behavioral treatment of test anxiety: Recent research and future trends. Behavior Therapy, 1972, 3, 253-262.

Brown, J.I., Bennett, J.M., Hanna, G.S. The Nelson-Denny Test For High School and College, Forms E and F. Iowa City: Riverside Press, 1980.

Bennett, J.M. & Wark, D.M. Test Anxiety of College Students - Test of a Model. Perspective in Reading Research and Instruction. the Twenty Ninth Yearbook of the National Reading Conference, Michael Kamil and Eldon Moe (Eds.) Washington D.C.: National Reading Conference, 1980, 255-258.

Gilbert, D. Study in Depth. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1966, 19-21.

Goldfried, M. Anxiety Reduction Through Cognitive - Behavioral Intervention in Kendall, P. & Hollon, S. (Eds.). Cognitive - Behavioral Interventions. Theory, Research and Procedures. New York: Academic Press, 1979.

Hollandsworth, J.G., Glazeski, R.C., Kirkland, K., Jones, G., Van Norman, L.R. An analysis of the nature and effects of test anxiety: Cognitive, behavioral and physiological components. Cognitive Therapy & Research, 1979, 3, 165-180.

Lent, R., Russell, R.K., Treatment of test anxiety by cue-controlled desensitization and study skills training. Journal of Counseling Psychology, 1978, 25, 217-224.

Liebert, R.J., & Morris, L.W. Cognitive and emotional components of test anxiety: A distinction and some initial data. Psychological Reports, 1967, 20 975-978.

Meichenbaum, D. Cognitive - Beharior Modification. New York: Plenum Press, 1977.

Mitchell, K., Hall, R., & Piatkowsha, O. A group program for the treatment of failing college students. Behavior Therapy, 1975, 6, 324-336.

Spielberger, C.D., & Gorsuch, R.L. The Development of the State-Trait Anxiety Inventory, in Spielberger & Gorsuch (Eds.) Mediating Processes in Verbal Conditioning, Final Report to the National Institute of Health, U.S. Public Health Service Grant, MH7229 & HD947, 1966.

Sarason, I. Experimental Approaches to Test Anxiety: Attention and the Uses of Information. In Spielberger, C.D. (Eds.) Anxiety: Current Trends, (Volume 2) New York: Academic Press, 1972.

Thurstone, T.G. Reading for Understanding. Chicago: Science Research Associates, Inc., 1959.

Wark, D. & Walch, M. Heart rate of high and low test-panic readers. Interaction: Research and Practice in College-Adult Reading, the 23rd Yearbook of the National Reading Conference, Phil Nacke, (Ed.) Clemson, South Carolina: National Reading Conference, 1974, 209-213.

Wark, D., Bennett, J.M., Wolinski, J. The Effects of Anxiety on Reading Comprehension. In Fisher, J. (Ed.) College and Adult Reading X. Minneapolis: North Central Reading Association, 1980a.

Wark, D., & Bennett, J.M. The Measurement of Test Anxiety in a Reading Center. Reading World. In press.

Wildemuth, B. Test Anxiety. An Extensive Bibliography. ERIC/TM Report, 1964. ERIC Clearing House on Tests, Measurement and Evaluation. Princeton, N.J.: Educational Testing Service, 1977.

Wine, J. Test anxiety and direction of attention. Psychological Bulletin, 1971, 76 92-104.

Wolpe, J. Practice of Behavior Therapy, New York: Pergamon, 1969.

Case Reports on Test Anxiety

Anna L. Fussell
University of Minnesota

ABSTRACT

This article discusses three case studies in test anxiety. Constructing anxiety hierarchies, use of desensitization and relaxation techniques have been the most widely used interventions. In this article, we look at various other alternatives. These include shifting internal self-talk from negative to positive, statements, use of appropriate test taking and test preparation strategies and attending to any physical problems that may impede the student's progress. Use of imagery to delineate oppositional needs/wants through the perspective of Psychosynethesis is also used in one case. These case studies are offered as examples of specific instances in which these methods are used.

Test anxiety usually is characterized as a condition in which two phenomenon occur. These are signs of anxiety, fear, panic, tension, and a temporary forgetting followed by full recall once the exam has been handed in (Wark, 1971).

Common experiences of students displaying test anxiety are that they have failed, at least in their own eyes, on previous tests. Typically, grades are important to students and they may feel the stress of other expectations - such as parental approval, a need for a high G.P.A. to enter graduate school or a professional school and so there is the pressure to perform.

This paper looks at three case studies paying particular attention to treatment of such symptoms. Historically, relaxation and desensitization have been used to reduce anxiety in the stimulus environment. In these case studies, we view other alternatives - some are common and some are not so common. Such methods such as teaching test preparation and test-taking skills and implementing a shift of negative self-dialogue to a more positive self-dialogue are used. Imagery is used to identify and symbolically represent the problem. The use of dialogue with imagery begins to help the client accept what is happening and take action so that the resolution of the conflict may begin. One case is also included as a reminder that physical causes also may contribute to the psychological arena. The purpose of this paper is not to advocate any one method but to document what actually happened with several clients as an illustration of various treatments of test anxiety.

The Case of Bob

History

Bob was a pre-med student presently taking physics and math. In the initial interview, he indicated that he was living with his sister off campus. He was putting a lot of pressure on himself and receiving a lot of pressure from his father to succeed in his course work so that he could go on and become an M.D. He indicated that he became immobilized in a test situation particularly in physics and math. He reported that he had put in at least 60 hours of studying, would know the material and then would blow it on the test. He had chosen a particular prestigous medical school to which he was applying and knew that he needed a G.P.A. of a 4.0 to be able to compete with other medical school applicants. Bob was 23 and indicated that he had a very close relationship with his family. It seemed likely that he had not psychologically broken away from his family.

Counseling Strategy

The particular direction originally chosen in this case was to determine specifically what the pattern of the test anxiety was, construct an anxiety hierarchy and do desensitization work. However, upon ascertaining the pattern, we changed direction to the use of relaxation, instruction of study techniques and changing self-dialogue.

Bob described that the particular pattern for him was to go into the test situation after having studied with a study group immediately prior to the quiz. As soon as he received the exam and began to read over the first problem, he would get angry with the professor over the particular material covered in the question because he would not be able to do the first problem and then would assume that he was not prepared and could not do well on the rest of the test. He would then begin to work on that one problem with his attention not fully there. He would be thinking about what the other problems might be. He described his behavior as being very tenacious, hanging onto one particular problem until he had worked it at its maximum before going on to the next test item.

The first task was to teach Bob

some simple test-taking techniques, such as reading all questions on the exam, noting how many points each exam question was worth, and then making a decision about which ones to complete and in what order, based on how many points each one counted and how much he knew about that particular item. He also made that decision based on how much time that he estimated he could give each particular question.

He stated that he knew the material and when he was in the study group, it appeared that he knew the material more so than the rest of his comrades. However, on the day of the test when he would get together with his test study group, he would get immobilized by fear and say, "Oh, my gosh, these people know more than I do - I don't know anything."

Bob was also given specific homework based on the fact that he spent many hours a week studying these two specific subjects and also spent time in a study group. His homework was to refrain from studying with his study group immediately prior to the exam and also to combat the internal self-talk of "Oh, my gosh, I don't know anything." He was instructed to replace this negative statement with a very simple sentence such as "I have studied for this material" - "I know this material" - "I will be able to answer the questions just fine" and use those three sentences over and over again prior to going into the exam and whenever he felt the anxiety rise in the test situation.

He received an A on the next tests that he took, both in physics and in math. He was very happy to report this success to the counselor, but immediately followed up that self-report with "Now that I know I can do it, I should have been doing it all along," and went into a self-chastizing routine.

Based on the negative internal dialogue that Bob carried on with himself, the counselor chose to work very specifically, asked Bob to bring in the tests he had taken and they would review them together and talk about what thoughts were going through Bob's head as he read and how he took each test.

He made some progress. He chose not to meet with his study group immediately prior to the test time. Instead, he spent approximately 10 minutes before the test getting relaxed and quietly thinking about the specific strategy of how to take the test, and using his imagination to see himself successfully implementing these strategies. He made some progress of breaking the pattern of his self-described behavior of compulsively sticking to a question no matter what, and began working on other problems in the quiz. A key factor in the improvement appeared to be his recognizing and reviewing specifically how he behaved in each test situation, what prompted the anxiety; and then implementing some of the study and relaxation techniques as well as using the negative internal statement antidote of "I have studied this material, I do know it, I can do this question."

His progress continued slowly. However, if his performance in a test did not equal what his expectations would be, then he would panic very much on the next exam. If he made any mistakes of a careless nature by just working too fast, he would beat himself unmercifully about making such a mistake. He expected himself to perform perfectly each time. Typically, after each exam, he would report that he had blown the test very badly and then would later find out that his performance was not nearly as bad as he had thought it was. He continued under the panic situation to read and not comprehend the question, which led to feeling rushed, which led to being depressed, which led to not feeling as though he knew the material which led to hurrying and making a lot of mistakes. He at times was generally depressed, feeling that he was proving to himself that he did not have the capabilities to achieve academically in this profession. From time to time, his aspirations to go to medical school accelerated the pressure on his grade; specifically on his behavior or his performance in the test situation.

Much of his performance was affected by what his father thought of him and the particular behavior that he exhibited on each quiz or exam.

At the end of the quarter, however, he did report the ability to remain calm through the quiz regardless of all the pressure that he felt and though he did make a few errors by feeling rushed, in general, he was able to retain the material and answer the questions on the exam. His final session with the counselor was one of preparing for the final exam in physics and math. It was clear that using the relaxation techniques to calm down the feelings of frustration and panic and thoughts of "I don't know the material" in the immediate situation of the test environment allowed him to concentrate on bringing the knowledge that he had to bear on the specific test item. Bob chose to terminate counseling at that time.

Conclusions

Specific test-taking strategies as well as the relaxation and visualization techniques were useful to change Bob's test-taking behaviors. It would appear that a great deal of the internal dialogue was still a problem. That would need further treatment.

In this particular case, we would probably have been able to use desensitization as a useful intervention. This counselor, however, felt that it was important to determine some of the cognitive beliefs that were affecting and perhaps causing the panic. It was important to determine the larger behavior pattern, and also to determine the specific behaviors exhibited in each exam. This allowed the counseling to be directed to several problem areas: to use relaxation as one tool to help deflect the panic in the exam situation, as well as instruct the student about more useful study and test-taking practices. The most important intervention deals with the internal dialogue. Replacement of the negative self-talk with a more constructive belief that he indeed could perform is one method. There are others. All are deisgned to guide the student towards a better self-concept. One such technique is used in the next case.

The Case of Barbara

History

Barbara returned to college at age

27, after having worked as a lab technician for a number of years since graduation from high school. Barbara was pursuing an undergraduate degree in General Psychology in preparation for graduate work to become a research psychologist. The client came in presenting the problem that she could not perform in a test situation. She was currently taking a course in statistics and claimed that when she entered the test situation, she could not remember the material and felt very anxious. When she left the test environment she did remember all the material because she had been well prepared. Here is a classical case of test anxiety.

Counseling Strategy

The counselor's hypothesis was that the client did indeed have test anxiety. The client was a very good student in most of her other classes. In this particular case, the client panicked over the particular subject matter. The client had talked at length about preparation time, studying techniques, and it seemed apparent that the client had studied effectively for the exam.

The counselor's strategy then was to have Barbara go back to the most recent test experience and get more information about the nature of the panic.

The client immediately recalled and referred to the first test in statistics which she had taken one week prior to seeing the counselor. Barbara reported walking into the testing room feeling confident about the material, sitting down and as she sat down, began to get very nervous, began to sweat and wonder what was going to be on the test. When she received the test, she looked at it and saw that all of the problems were stated in the form of "word problems." She remembered thinking immediately "I can't stand word problems - I have not been able to do word problems since I was in the third grade." When asked, she described these thoughts as a voice coming from the back of her head that states in a very loud and deep voice, "You can't do word problems." She read the first test item - did not recognize how to do it immediately and the voice popped in saying, "See, you can't do word problems."

The client reported feeling more anxiety and moving onto the next test item. Again, she did not recognize immediately how to do that particular problem and the voice from the back of her head again said, "See, you can't do word problems." The client reported not being able to calm herself at this point. She went from test item to test item and the panic began to build. She reported feeling very frantic and the need to try to hurry to do the problems that she did know. Her methodology was to try to finish the exam and then go back to the problems that she did not know how to do and work on those. She reported thinking "I am not going to get all of this done before the test time is up." And when the test came back graded, she found that she had made many errors that she called small, dumb mistakes because she was hurrying. She reported that the voice in the back of her head had kept telling her "hurry, hurry, hurry, you are not going to get this all done--see, you don't know how to do these statistics."

As she continued to talk about the

voice in the back of her head, she spontaneously got an image of it as one of a little old man. She expressed her feelings about this part of her as not liking him at all and knowing that he had been around for a long time trying to convince her that she was not going to be able to do anything that had to do with math. She spoke of an adversarial relationship with him and the need to outfox him, wanting to tell him to get away and leave her alone. She stated that in past test situations, she would tell him to leave and leave her alone - that she needed to do her test. In this process, the use of imagery allowed the client to re-enter the experience for purposes of gaining information, finding the emotional block, releasing emotional energy and replacing an old belief with a more accurate one.

The counselor asked her to go back to the experience of last week's test and see the room, see the test and really experience what it was like to be taking that test at that time (a use of imagery). Barbara stated that it reminded her of the first test she had ever taken in general chemistry two years prior. The counselor had her pursue that memory. Barbara remembered having missed a number of lectures when preparing for this earlier general chemistry test. She indicated that she had read chapters 3 and 4 and had just barely studied chapter 5. She had reviewed her notes and felt prepared except for this one chapter 5. When she got into the test, she discovered that 11 the questions were from chapter 5 and reported receiving a score of 8 out of 100 points.

The counselor had her stay with her

experience of taking that earlier test in general chemistry. She reported feelings of excruciating panic, embarrassment and stated "I just want to scream and run out of here. It is awful." She indicated that in that particular test that was taken several years ago, it was as though the little man took the test with her and was the one feeling those feelings. She continued "Whenever I go into a test now, he tells me 'you did lousy then and you won't be able to do it now'."

Initially, she indicated that she did not want to talk with this other part of herself at all. To facilitate the dialogue, the counselor asked her to remember how the little old man felt taking the general chemistry test. Then Barbara was instructed to tell him how she responded to his feelings of taking that test.

The strategy here was to set up dialogue between the adult who is presently taking the test and this part who has had the experience of pain and embarrassment and panic in the past. It is also a way to emphasize that there is an adult part of her with strengths and competencies. In the past, the dialogue has been one of anger and a desire on the client's part to ignore this voice. To build up incentive to begin the dialogue, Barbara was asked how the voice responded when she ignored him. She indicated that he did not go away and, in fact, what happened was he took control and got even more frightened and insistent. Barbara was asked if she would like for that to continue to happen. She indicated no, she was angry with his fearful and accusing response, but she did feel compassionate towards him when he had felt so scared, panicked and embarrassed.

She was instructed to tell the old man how she felt and listen to what he had to say. She reported that he did hear her. The counselor then instructed Barbara to tell him more about her compassion.

After a few minutes of beginning to build rapport with him, via imagery and talking aloud, she reported that he was so overwhelmed by her understanding that he rushed over and gave her a hug. It felt like she was resolving an argument with a close friend after a long, long period of being at odds with each other.

The next step was to find out more about why he was scared. So, Barbara asked him. Barbara indicated that he told her he was afraid that she did not know the answers to the tests and did not trust her to be able to answer the questions adequately (based on past experience). Barbara responded by saying that she could understand how he felt that way, but that she was the one who had done the studying for the tests and that she did know the answers to the tests and that she needed his help. The counselor instructed the client to ask the voice (old man) what it was that he needed from the client. He answered with a detailed study plan which needed to be accomplished by the next day to prepare for the upcoming exam. Barbara was asked whether or not she could accomplish that and she responded "Yes, I planned on doing that anyway." She was instructed to tell that to the voice and see how he responded. He indicated that he was hoping that she would be able to get the studying done but he was not quite willing to trust that she could do that.

Barbara was asked how she felt

about hearing him say he did not quite trust her. She then told the little man that she did understand how he could feel that way - that he had had a long history with this feeling about taking tests but that he just would have to trust her.

Barbara was asked to tell the little man what she needed from him. She told him that she needed for him to be her friend and her ally. He could come to the test and watch her work but he was not to get so afraid. The little man responded yes, he understood that and he was willing to do it. The counselor asked the client if she believed the little man. Barbara indicated she was not quite sure she was willing to trust that he could control his fear. She said that she and the little man felt the same way. They both were not quite willing to trust that it was going to be all right but that they were both willing to give each other a try.

The counselor asked "Barbara, how will you respond if the little man does come into the test situation tomorrow, and although he is really going to try to be your ally, as soon as he sees the test - all of that fear and panic is elicited again," Barbara replied by saying that she was going to reassure him and tell him that she had studied for the test - that it was okay.

The client was then asked to come to the room (the present) from her imagery and when she opened her eyes she reported feeling a whole lot better about taking the test that was coming up tomorrow. She felt like she established a relationship with a part of herself that she had been at war with for a number of years and that together, they were going to work this out.

Follow Up

Barbara came back to report on how the test had gone. Walking to the test, she had talked with him and said, "Remember our deal? I have fulfilled my part of our bargain, now it is your turn. I know all the formulas - just relax. I am the one who has studied for this test, I know the material."

She further stated that when she first got to the classroom, she had heard other classmates talking amongst themselves about a specific formula and saying "Oh dear, I don't know that."

Instantly, she felt fearful, but then recognized what was happening and spoke to both herself and the little old man "I do know that formula - that is their problem, but we (me and the little old man) are going to sit down and stay relaxed."

Barbara indicated that she was then able to be fully present while taking the exam, she was not caught up in any fear or tension. She could read each question clearly. She stated that it was the most relaxed she had been in two years with an exam of this nature.

After the exam, she talked more with the little man. Both of them were elated. He was really proud that she could do the problems. She said that the risk of trusting each other had paid off. "So now we are looking forward to taking another test together."

Conclusions

In this case, imagery provides a symbolic representation of the internal experience of the client. The imagery increased the understanding of both the client and the counselor of the problem, and allowed the client to "see" a "part" of herself that was in an adversarial relationship with the client (conflicting needs). This session also demonstrated the first three stages of the growth process (Vargiu, 1974)

Through *recognition* of "a part" of herself that did not believe she could do well in math areas, the client began to understand her internal process and begin to more objectively assess the belief and begin to change it. She moved from identifying as someone who could not perform, to a more competent objective adult who indeed did have the capacity to achieve in a math discipline, and someone who had the ability to assertively stand up to this internal voice that said she could not do it. Another way of saying, is that 'she took charge of the emotions that were interfering.'

The use of dialogue facilitated the client moving into the stage of *acceptance* of the part's pain and panic (or her emotions), which evoked compassion and warmth for the part of her that had long feared failure. With that acceptance came freedom to more actively negotiate a truce and attend to her various needs so that they would not conflict in the actual testing setting.

Thus *coordinating* their efforts, she and the little old man moved towards action that met both their needs and reduced the feelings stimulated by prior stress (the action stage).

It is natural that neither would

tend to trust each other completely based on past history - so it was important to make a contingency plan in case the situation brought out similar reactions, until there is more trust as a result of such experience.

This particular method gives clients a way to grasp what is happening. With this understanding, they can more actively cooperate with and take charge of their own growth process. Imagery provides the client with a useful tool to continue the dialogue outside the counseling session as demonstrated in Barbara's followup.

This client was unique in that the entire intervention occurred in one session that lasted an hour and a half. Her maturity enabled her to gain the understanding and utilize it with sophistication. She also moved through the three stages of integration in that one meeting. Other clients might not move as quickly.

This method utilized a perspective known as Psychosynthesis. For further explanation of the theory and application, refer to Vargiu (1974), or Satir (1978).

The Case of Joan

History

Joan, a graduate engineering student, came to the Reading and Study Skills Center based on a referral from a friend. Joan was approximately 23 years old, single and resided in an apartment which she shared with a friend. She was the second child in a family of four children.

The client's presenting problem was

that she could not handle tests. She stated that she panicked, could not sleep the night before exams and then was in no condition to take the test. During the initial interview, Joan was very tense and seemed to fight tears back as if to say "I am strong, I don't need to cry." The counselor paid particular note to the posture of the client. Along with the tenseness, her body seemed extraordinarily rigid and her posture indicated that she might be in some kind of pain. Her head was held to one side and tilted forward in an unnatural position. Joan indicated that it was very difficult to come to see a counselor and that she felt to do so was a statement that she had failed.

When Joan was asked about the nature of her test panic, she talked about extreme fatigue, a great deal of nervousness, and lack of sleep several nights prior to the exam. This set up conditions in which she was unable to concentrate and remember the material during a test situation. As Joan described her experience, she hesitated, spoke haltingly and seemed to measure each word. She indicated that this was the first time she has ever asked for "help" from any kind of counseling professional. With a great deal of reluctance, she also related that a great deal of her concern came from the fact that she also occasionally hallucinated during this period of fatigue. It was quite clear that she thought that this behavior would label her as psychotic.

Counseling Strategy

The core problem with this client was not apparent. Joan was awkward and reluctant to being open with the counselor. Joan seemed hyper and extremely tense at the time of the initial interview. It was difficult to determine whether that resulted from her fear of seeing a professional or from this client's inability to demonstrate her thoughts and emotions. During the initial interview, the counselor decided to do some relaxaction work with Joan, as well as to begin to fill out an anxiety hierarchy for some later work in desensitization. The counselor hypothesized that there might be some physiological reason for this particular case of anxiety.

During the second interview, Joan was very tense. The counselor explored the physiological hypothesis and recommended a physical exam. Joan resolutely refused to see a doctor and she stated that she did not trust any of them. She did indicate, however, that she had had an injury two years prior when she was thrown from a horse and landed full weight on her head. She had been in a great deal of pain from that injury, was in bed for many weeks. There had been bleeding from the ears, headaches, coldness in the extremities of her feet and hands and there had been both a hearing and a sight loss. She indicated that at the time, she had seen a doctor and he had said that nothing could be done or nothing was wrong.

Joan came to the third session and stated that she had gone to see an eye doctor the previous week because of pressure on her left eye and that she could not see very well out of it. Her headaches were continuing and were very severe. She was very frustrated because on one could tell her what exactly was the matter with her physically. She had spent the two weeks reviewing the relaxation tape as homework but did not seem to be able to follow the instructions on the tape. She indicated that she could not stop thinking. We again did more relaxation in that session which seemed to be ineffective. We discussed her physical problem and she revealed that she had gone to the student health service center and had been referred to a neurologist.

During the final interview, Joan indicated that she had been seeing a neurologist who was giving her medications that was seeming to bring the physical problems under control. The headaches no longer seemed to be unbearable and were, in fact, easing up considerably. Therefore, she was able to prepare better for her course work and particularly be able to better prepare for exams. The medication also seemed to be helping the insomnia prior to the exams. She reported having just taken an exam and that she was able to take the test with no difficulties. She indicated that at this time, she thought it best to conclude counseling.

Conclusions

It was very obvious that this client still had many emotional issues which could be attended to. However, she did not wish to follow these up at this time. Her major complaint had been tension related to test taking and since that particular issue had eased, the client's decision was to discontinue counseling.

During the final session, the client was more vivacious and relaxed than at any prior time. She indicated that the prescription did not seem to affect her ability to concentrate and the relief that came from no longer having the headaches was well worth taking the medication.

This case has been included in this presentation as a reminder that sometimes we could search the psychological realm for an answer to a particular problem with good cause and perhaps unearth plenty of information on which to work. This client had many emotional problems. It is also important, however, to keep in mind that the physiological state of the client is important. In this particular case, the client did not volunteer any information about her health. In fact, when asked how her health was, she indicated that it was just fine. It was pursuing the hunch that there might be something physically wrong that discovered the possibility of some physical damage by the accident some years before and most of the sessions were spent getting the client prepared to take the risk of going back and seeking out another medical opinion.

Summary

Test anxiety continues to bring in clients to our center. Each case is unique but there are patterns of similarity. As helping professionals, we know there is no "right" way and hence we all continue to explore therapeutic modalities. This paper attempts to illustrate some of the types of alternatives that have been used in our facility.

BIBLIOGRAPHY

Assagioli, R. Psychosynthesis. New York: Viking Press, 1965.

Satir, V. Your Many Faces. California: Celestial Arts, 1978.

Vargiu, J.G. Subpersonalities. Synthesis, 1974 Vol. 1, No. 1, WB 9 - WB 74.

Ward, N.G. Analysis of the Self: A Cognitive Relabeling Technique. Psychotherapy: Theory, Research and Practice, Spring, 1980, Vol. 17, No. 1, 30-36.

Wark, D.M. Test Panic, Daydreaming and Procrastination. College and Adult Reading, North Central Reading Association Yearbook, 1971, Vol. 6, 131-151.

Willis, S.L. Structured Fantasy as an Adjunctive Technique for the Treatment of Depression. Psychotherapy: Theory Research and Practice, Fall, 1976, Vol. 13, No. 3, 249-254.

OVOL
Reading/Clozure/Deletions
Optimum Involvement

Theoretical Reading Improvement Model and Clozure Pilot Study

Bruce Lloyd
Rosalie C. Lloyd
Denise Shearer
Western Michigan University

ABSTRACT

The purpose of the present pilot study was to discover whether an optimum word deletion sequence could be found for use in the cloze technique. Three groups of adults were studied: Group A read cloze passages with every fifth word deleted; Group B, with every tenth word deleted; Group C with words deleted at random. Beginning test results showed no significant performance differences between the three groups. At the conclusion of the study, Group A, using every fifth word passages, consistently outperformed the others.

In most educational and other service endeavors there is an optimum combination of factors that produce the greatest results. That is, there must be a balance among the elements involved as they interact and this element of balance deserves serious consideration. The concept holds true in all situations where there is a cluster of variables present in producing a result but it is especially true in the educational process. This balance may be referred to by the generic term OVOL--Optimum Viable Operational Limits.

In the process of education, the student shares part of the responsibility for learning. Students must be involved if they are to learn; they need to put forth appropriate effort and approach their learning process with motivation. Their reasoning processes might resemble the following:

> Reading activities in which I am truly involved motivate me to learn.
>
> When I am involved and motivated, I perform better at academic tasks.
>
> But involvement is the meaningful pursuit of knowledge, too much busywork wastes time and produces negative attitudes.
>
> A proper balance between activity and motivation involves me in a meaningful way.
>
> Balanced involvement and motivation = learning.

Our search for a reading activity that combined balance between involvement and motivation led us to investigate the cloze technique because previous studies seemed to indicate that clozure requires reader involvement and a balance in word deletion. We wanted the reading activity we studied to meet other criteria as well. It should be a quick reading assessment device, easily administered and easily scored and it should provide an indication of the optimal deletion sequence for use with college students. We hypothesized that a too frequently occurring deletions would not leave enough contextual clues for selecting a correct response and too few deletions would not provide an appropriate measure of comprehension ability and vocabulary knowledge.

Cloze: What it is. The cloze technique consists of printed passages from which words have been systematically deleted. The deletion may be every fifth word, every tenth word, or every Nth word. Currently, the every-fifth-word pattern is generally accepted in testing situations. For example:

> Clyde was hopelessly lost and thoroughly confused. He wandered aimlessly through the _________ as he desperately sought a _________ for the severe and detestable _________ inflicted upon him. Poor Clyde, what should he do?

The text indicates Clyde's plight, but its precise nature is not provided because essential words were deleted. Though the reader could insert words to complete the sentence, there is no assurance they would agree with the authors' original text. For example:

> Clyde was hopelessly lost and thoroughly confused. He wandered aimlessly through the desert as he desperately sought a remedy for the severe and detestable dermatitus inflicted upon him. Poor Clyde, what should he do?

makes just as much sense as:

> Clyde was hopelessly lost and thoroughly confused. He wandered aimlessly through the swamp as he desperately sought a reason for the severe and

> and detestable injustice inflicted upon him. Poor Clyde, what should he do?

Readers will use their imagination or background along with textual clues to complete the message, but there is no way to tell whether it agrees with the original in this case unless more context is provided.

A paragraph or so setting the contextual stage would enable the reader to make more accurate guesses. This is an example of an every-fifth-word deletion pattern, obviously the deletion of so many words in such a short space is too many for effective comprehension. What then is the optimal relationship between reading achievement and responses in this type of cloze? Is there any way to discover the optimum number of deletions to use for assessment purposes?

The Problem. The purpose of the present study was to discover whether cloze passages could be used as quick measures of reading performance and whether there is an optimum deletion pattern which could replace the standard every-fifth-word pattern presently in common use.

Design of the Study. Three groups of students enrolled in different sections of an undergraduate reading methods course participated in the study. They ranged in age from 19 to 24 years. Ninety-six per cent of the sample was female. All participants were tested with the Gates-MacGinitie Reading Tests, Survey F, Form 1. After a two week interval, all participants responded to the Sample Cloze Passage in which every fifth word was deleted. Then, at successive two week intervals, the groups responded to four more cloze passages as follows: Group 1 (N=16) used the every-fifth-word deletion sequence; Group 2 (N=17) used the every-tenth-word pattern; and Group 3 (N=21) used the variable word deletion pattern.

The Pearson product moment was used to determine correlations and the standard *t* test was used to determine the significance of performance differences.

Objective Results. A comparison of the beginning standardized reading test results for the groups indicated that there were no performance differences between them. All groups were at a similar reading performance level.

The Pearson analysis showed a significant relationship between Vocabulary and Comprehension, (as measured by the reading test) and the Sample Cloze Passage which each subject completed at the start of the experiment. The *t* test analysis of posttest results showed that Group 1 (the every-fifth-word cloze treatment group) consistently outperformed the other two groups (.01 level) in responses to subsequent prose passages. Group 1 did the every-fifth-word sequence.

Subjective Results. All groups seemed to enjoy participating in the study. At the beginning, all subjects worked eagerly on the Sample Cloze Passage, but those in Group 1 (working on the every-fifth-word sequence), became increasingly less enthusiastic as passages were administered, but they kept at the task as required. Use of the every-tenth-word (Group 2) and the random deletion pattern (Group 3) seemed to cause no lessening of enthusiasm.

Group 1, filling in every fifth word, though apparently disliking the task, seemed to rise above themselves in classroom performance. They were proficient at the cloze task. They were more alert and responsive to regular classroom activities. This finding substantiates those of Rye (5).

Conclusions. Because of the small N in each group, one must be cautious in drawing conclusions. Yet this was a pilot study and the results seem to indicate that, for this population sample,

1. The Sample Cloze Paragraph is a good predictor of vocabulary and comprehension performance.
2. The every-fifth-word deletion sequence appears to trigger more intense reading and could possibly find a use in reading therapy work with college level students who wish to improve reading achievement.
3. The every-fifth-word deletion sequence indeed produced (?) student involvement.
4. The study did not appear to indicate any particular optimum deletion rate for the cloze technique.

Recommendations for Further Study. In light of findings of the present pilot study, a follow-up program is recommended. Focus should be on several factors:

1. The research should be replicated using larger numbers of subjects.
2. The standardized reading achievement test should be higher in difficulty and discrimination. Moreover pretest and posttest results should be used and compared.

3. The search for an optimum deletion sequence should continue to be compared with the standard every fifth-word pattern.
4. A measure of the Involvement Factor should be sought: what is it and why does it affect student performance?

It is our hope that others will continue to research this problem and advise us of their findings.

BIBLIOGRAPHY

1. Entin, Eileen B. and George R. Klare, "Differential Relationships of Two Versions of Cloze Tests to Vocabulary and Reading Comprehension." In Michael L. Kamil and Alden J. Moe (Eds.), Reading Research: Studies and Applications. Twenty-eighth Yearbook of the National Reading Conference, 1979. pp 68-71.
2. Herber, Harold L., Teaching Reading in Content Areas. (2nd Edition) Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978. 237-238, ad passim.
3. Jongsma, Eugene A., Cloze Instruction Research: A Second Look. Newark, Delaware: International Reading Association, 1980
4. McKenna, Michael C. and Richard D. Robinson, An Introduction to the Cloze Procedure (An Annotated Bibliography). Newark, Delaware: International Reading Association, 1980
5. Rye, James, "A Closer Look at Cloze," English in Education, 13:44-54 Autumn, 1979.

6. Vacca, Richard T., Content Area Reading. Boston: Little, Brown and Company, 1981. pp 270-273.

Individualizing a Reading and Study Skills Course

Susan Whitmer
University of Wisconsin-Superior

ABSTRACT

The University of Wisconsin-Superior offers a college level reading program which features student participation in the preparation of an individualized instructional program and weekly teacher conferences. The author presents an effective model for using published materials in an individualized setting which incorporates student input into the process of program development.

The University of Wisconsin-Superior offers a 3-credit hour individualized reading course for all university students feeling they need to improve their reading and study skills to meet the demands of college coursework.

A number of students enroll in the reading improvement course at UW-Superior voluntarily generally have a good idea of their skill competencies and deficiencies and seek help in certain skill areas only. They may either choose to take the whole course and review all the skills and techniques relating to reading and studying or they may visit the lab only for assistance in specific skill areas. Other students take the course on advice from their advisor or may be placed in the course automatically because they are admitted to the University conditionally as a result of low ACT scores or poor high school records. The makeup of the class therefore includes students that have had varying degrees of success in past reading experiences.

The course is designed to meet the individual needs of each student in the class. The initial class period involves acquainting the students with the course procedures and preparing a folder for each student in which to file all materials received during the quarter. The course syllabus and course objectives are also explained during the first class session.

Each student, with the advice of the instructor selects three reading skill areas to be developed during the course. Students may choose from the following skill areas: vocabulary, spelling, rate, comprehension, study techniques, or any other reading related skill of importance to the student. Each student meets weekly with the instructor to develop one weekly objective for each area selected. This procedure allows for individualized course structure.

The reading course is offered on a pass/fail basis. To pass the course a student must show evidence of having met his/her weekly objectives throughout the course and have attended all class sessions. There is no homework in the course, all work being done during the class periods and consisting of some lecture and some individualized labwork.

The lecture portion of the course presents general information on skill areas helpful to all the students. Students are exposed to the lecture material and then choose those areas they wish to work on independently during the course. Regardless of what quarter a student is taking the class, the class begins with a discussion of college terms and regulations. This includes grade averages, general education requirements, pass/fail options, how to drop and add courses, probation, and advisement. Even many students who have been on campus more than one quarter are often unfamiliar with these procedures.

Students complete a questionnaire about their individual study habits and take a reading placement test early in the course. This information provides the instructor with guidelines for developing the independent skill building portion of the course. The College Board English Placement Test and the Nelson-Denny Reading Test are both used. Students are also given a tour of the library by the director of the reference section. This helps the students to feel more at ease when using the library for studying or locating specific materials. Students tend to go to the library more often once they know who they can ask for help and feel familiar with the surroundings.

Other topics discussed in the lectures include: varying methods of skimming and scanning, ways of expanding vocabulary and spelling skills, techniques for studying a textbook and class notes, methods for taking accurate lecture and textbook notes, and how to prepare for and take exams of all types. Organizing study time is also an important topic in the lecture section. Students are informed of the importance of planning a balanced load between school, work, and personal business. The enclosed copy of Quality of Life and Use of Time handouts are introduced as a thought provoking exercise. Another lecture topic given heavy emphasis is reading comprehension and rate improvement. The majority of the students in the course choose some aspect of reading comprehension and rate for areas of improvement during independent lab time.

Students spend three hours weekly in the lab, working independently in the materials chosen by the student and the instructor. Students keep a log with entries for each time they work in the lab. This is their record of time spent and work done towards the weekly objectives. The log is brought to each conference. Students must be working in the skill areas chosen and materials suggested in order to be making progress towards these goals. At the time of the conference, each student meets with the instructor individually to discuss last week's work and new work to be done over the next three lab periods. The instructor guides the student in his/her lab work using a combination of information from verbal meetings, written objectives, past work, and results of the initial reading test and a study skills survey.

Students have a wide variety of materials available to them. Among those most used by students are the College Reading Program by McGraw Hill which has quick reading selections with comprehension questions. The readings are divided into subject areas so the students can choose topics of interest to them. Association of American Publishers prints many excellent small pamphlets dealing with the lecture topics of the course. McGraw Hill's Doing Well in College, Houghton Mifflin's books by Shepard, and Walter Pauk's materials form the backbone of the students' lab work.

At the conclusion of the quarter students complete a final course evaluation. Students must also meet with the instructor individually for a final conference, at which time the instructor discusses the progress made by each student toward his/her individual objective. The instructor also discusses the courses the student plans on taking for the next quarter and the progress the student made during the current quarter. The instructor discusses with the student the materials that were most beneficial and how the skills that the student learned will apply to future courses.

These 3 pages taken from Volunteer Career Development Program of New York, adopted by Junior League of Duluth

VTM-21
Additional Material

QUALITY OF LIFE

1. How much purpose, meaning, and value do you feel your life has?
0 1 2 3 4 5 6 7 8 9 10
Little Great

2. How often is your typical day exciting, vital and fulfilling?
0 1 2 3 4 5 6 7 8 9 10
Seldom Usually

3. How much freedom do you have to do as you please?
0 1 2 3 4 5 6 7 8 9 10
Little Great

4. How much confidence do you have in your ability to cope?
0 1 2 3 4 5 6 7 8 9 10
Little Much

5. How many of your basic goals, dreams, or desires are you achieving?
0 1 2 3 4 5 6 7 8 9 10
Few Most

6. How often do the things you do turn out right?
0 1 2 3 4 5 6 7 8 9 10
Seldom Usually

7. How much guilt do you feel about things you should have done, but haven't?
0 1 2 3 4 5 6 7 8 9 10
Much Little

8. How often do other people show their liking for you and offer to help you?
0 1 2 3 4 5 6 7 8 9 10
Seldom Often

9. How often do you feel joyful, gay, or playful?
0 1 2 3 4 5 6 7 8 9 10
Seldom Often

10. How much pride do you have in yourself and your actions?
0 1 2 3 4 5 6 7 8 9 10
Little Great

TOTAL POINTS:___________

DATE:_________________

PTM-20
Additional Material

For each question, mark one of the numbers. Answer as honestly as you can -- neither over-rate nor under-rate yourself. Add up your total scores for USE OF TIME and QUALITY OF LIFE, and see the back page for our comments.

USE OF TIME

1. Do you plan ahead as well as you should?
   0 1 2 3 4 5 6 7 8 9 10
   Seldom — Usually

2. How fast do you normally get things done?
   0 1 2 3 4 5 6 7 8 9 10
   Slowly — Quickly

3. How often do you think about your goals and purpose in life?
   0 1 2 3 4 5 6 7 8 9 10
   Seldom — Often

4. How "balanced" are your typical activities (between recreation, work, family, etc.)?
   0 1 2 3 4 5 6 7 8 9 10
   Unbalanced — Very Balanced

5. How often do you think positive vs. negative thoughts about yourself and your chances?
   0 1 2 3 4 5 6 7 8 9 10
   Seldom — Usually

6. How often do you do what you plan to do?
   0 1 2 3 4 5 6 7 8 9 10
   Seldom — Usually

7. How often do you vent your emotions (laugh, cry, say how you feel...)?
   0 1 2 3 4 5 6 7 8 9 10
   Seldom — Often

8. How much control do you exercise over the way you regularly spend your time?
   0 1 2 3 4 5 6 7 8 9 10
   Little — Much

9. When things need to be done, how often do you think carefully before you act?
   0 1 2 3 4 5 6 7 8 9 10
   Seldom — Usually

10. When with other people, how often are you outgoing, helpful, and friendly?
    0 1 2 3 4 5 6 7 8 9 10
    Seldom — Usually

TOTAL POINTS:______________

PTM-22
Additional Material

YOUR "TIME & LIFE" STATUS

RANGES	USE OF TIME	QUALITY OF LIFE
75 - 100	EXCELLENT. You're making exceptionally good use of your time. Keep it up! Or move even higher on the scale.	EXCELLENT. Your life is vital, exciting, very effective and worthwhile; yet there may even be more in store for you.
50 - 74	GOOD. You are using your time well. But you could use it a lot better -- and benefit correspondingly.	GOOD. Your life is fairly effective and satisfying, but you're missing a lot. You could be on the verge of better things.
25 - 49	FAIR. Your use of time is below par. Much of your potential appears to be unused -- waiting be tapped.	FAIR. You could be getting a lot more out of life. There are worlds of satisfaction and vital activity that you could be enjoying.
0 - 24	POOR. Your use of time could be greatly improved. The bulk of your potential appears to be unused, waiting to be tapped.	POOR. You're dissatisfied and depressed. But take heart! People who rise to the greatest heights often start from the lowest depths.

Did you get about the same total score for the "life" questions as you did for the "time" questions? Most people do. Why? Because the way we use our time largely determines the quality of our lives.

A small improvement in your time-management skills can mean a significant improvement in your life and work.

Computerized Diagnosis/Prescription in a Learning Lab

Donald Goodman
Sandra Schwab
Muskegon Community College

ABSTRACT

To meet the various learning needs of students in higher education today, different types of diagnostic prescriptive learning labs have been established at most colleges and universities. As diagnostic procedures become more specific and the remediation more individualized, record keeping becomes an increasingly complex and difficult task. Goodman and Schwab describe an effective computerized program which makes detailed diagnosis and individualized remedial programs of instruction both possible and practical.

Anyone who has ever worked in an individualized learning lab will tell you that the biggest problem a reading instructor runs into is not the teaching itself, but deciding what needs to be taught, and how to teach it. Sam is slow as maple syrup sap; Deborah has been taught to "speed-read" and zings over difficult material like a pig on ice, never quite knowing what she's read; Verrell doesn't know how to study; and Danny stands there in the college doorway armed with a discombobulated collection of reading skills that add up to about fourth grade level. As the educationists are fond of saying, these students seem to have different needs.

To meet the varying needs of students, individualized diagnostic/prescription learning labs popped out in colleges and high schools all over the country in the 70's like Michigan morels after a soft spring shower. Some labs used a "modular" approach, which meant in many cases that everyone in the class did the same thing at different times and varying speeds. Many tried a "personalized" approach, meaning students did different things at different times and at varying speeds.

The problem with running a personalized lab is that it demands a superhuman awareness of mountains of available material as well as a cold and calculating ability to examine test results and interpret them as patterns of strengths and weaknesses. The diagnostician/prescriber has to determine very quickly a student's topic needs - vocabulary, word attack skills, comprehension of details or main ideas, spelling, speed, study skills - as well as the appropriate reading level, and has to then plug that student into the proper text, chapter, kit, cassette, workbook, or machine to begin to cure his problem. It's an ideal job for giving you fits, or making you think about shucking it all off on a computer.

Our Shuckee: Wanda Wang

At Muskegon Community College's Personalized Achievement Lab we decided early that if our Wang 2200 computer (named Wanda by our staff), was to be of any real assistance in diagnosing and prescribing she would have to learn to live with our system, not we with hers. That meant we would continue to use our traditional screening and measuring instrument, the Nelson-Denny Reading Test form C or D, as well as our regular text books (we assign a "core" text from a list of almost 20 titles), our electric pacers, RFU Kits, Newsread comprehension sheets, and many other exercises and devices designed to cure specific reading problems. The computer would also have to use some common sense when examining test grades - be alert to discrepancies between the vocabulary and comprehension scores, and note when a student appeared to be making wild guesses, or was plodding so slowly and carefully that it affected his vocabulary and comprehension scores. In addition, it should recommend other tests - listening tests or even an elementary level reading test - if the scores warranted such a decision.

It was a tall order, but since we had set Wanda on difficult expeditions before (see "Testing for Readability" - Goodman & Schwab: Creative Computing April, 1980), we felt confident she could work her way through this project. And she did.

The Test

The Nelson-Denny Reading Test is the most popular standardized reading test in American colleges and universityie - highly respected, carefully researched, thoroughly normed. It gives eight scores:

Vocabulary	Raw score & %le Rank
Comprehension	" " " " "
Total	" " " " "
Rate	" " " " "

We discarded the total and rate scores immediately. We believed that the "total" was meaningless, and the rate score, based on a one-minute sprint through an article, was probably less than reliable for our purposes. Besides, we had other ways to measure a student's reading rate. The data we chose to feed Wanda were:

Vocabulary: Raw Score %le Rank

Number of questions answered
% Correct (To be figured by the computer)

Comprehension: Same as above

The "raw score" for the vocabulary test meant the number of correct answers; the "raw score" for the comprehension test was the number of correct answers times two. The percentile rank indicated the student's standing in comparison with other college freshmen (i.e., 50%ile meant half the freshmen did better, half did worse; 25%le meant three-fourths did better, only one quarter scored lower.)

Sorting Out Material

We inventoried all the materials we regularly use to develop comprehension, vocabulary, rate, study skills, and spelling. Following this laundry listing we classified all of the materials into four levels of difficulty. Some materials fell into more than one difficulty level. For instance, the basic text _Free to Read_ by Bammen, Hyana, and Prescott was listed for both Level I and Level II; the rather difficult text by Arthur Heilman, _Improve Your Reading Ability,_ appeared in Levels III and IV. Our reading pacer materials by Educational Development Laboratories already came in a number of different levels of difficulty, as did our comprehension of details kit, _Reading for Understanding_. On the other hand, the text _IDEA_ by Kolzow proved too easy for any but the lowest level, and Skimming and Scanning by Raygor was reserved for only the best students at the highest level.

At each of the four levels we listed materials for vocabulary improvement, comprehension, rate, study skills, and spelling. It was assumed that nearly everyone would be interested in the first three; a student is asked when he takes the Nelson-Denny Test whether he is interested in study skills and spelling as well. This decision is entered in the computer along with the test data.

The Program

Remember that Wanda has been told a student's vocabulary and comprehension raw scores, percentile rank scores, and the number of questions actually answered. She must figure the percent of correct answers herself (There are 100 possible answers in vocabulary, 36 in comprehension).

She then does the following:

1. Selects the appropriate vocabulary package according to the Nelson-Denny vocabulary score.
2. Selects the appropriate comprehension and rate packages according to the Nelson-Denny comprehension score.
3. Selects the appropriate spelling package (if desired) according to the student's vocabulary score.
4. Selects the appropriate study skills package (if desired) according to the student's comprehension scores.
5. PRINTS vocabulary, comprehension, and rate packages for all students.
6. PRINTS spelling and study skills packages if desired.

Our four levels are marked by raw score and/or percentile rank as follows:

Vocabulary:

Level I	Raw score	0-15
	Percentile rank	0--8
Level II	Raw score	16-25
	Percentile rank	10-29
Level III	Raw score	26-38
	Percentile rank	32-59
Level IV	Raw score	39-100
	Percentile rank	61-99

Comprehension:

Level I	Raw score	0-24
	Percentile rank	0--8
Level II	Raw score	26-34
	Percentile rank	11-26
Level III	Raw score	36-44
	Percentile rank	34-60
Level IV	Raw score	46-100
	Percentile rank	66-99

Cautions and Yellow Flags

We wanted to be alert to notice score anomalies and lucky guessers so we built a number of alerts into our system which would warn the instructor that the packages selected may not be the best choice for one reason or another.

To catch those students who fly through the test marking everything in sight whether they've read it or not we cautioned:

1. If percent correct is lower than 50, PRINT: HIGH PERCENTAGE OF INCORRECT RESPONSES IN VOCABULARY. PERCENTILE

PERCENTILE RANK MAY NOT BE VALID. (Wanda then selects the appropriate vocabulary package and the next lower one as well.)

On the other hand, the turtle who drags along but gets nearly everything he's answered correct needs to be identified. Some poor scorers in the vocabulary test have good vocabularies but they don't answer enough questions in the allotted ten minutes to show it:

2. If number answered is less than 26, and percent correct is over 75, PRINT: VOCABULARY PERCENT OF CORRECT RESPONSES UNUSUALLY HIGH. PERCENTILE RANK MAY NOT BE ACCURATE. CHECK FOR LOW RATE. (Wanda then selects the appropriate vocabulary package and the next higher package as well.)

The same slowpoke may also throw his comprehension score off by never getting out of the first gear:

3. If percent correct is 75 or over and number answered is less than 21, PRINT: COMPREHENSION % OF CORRECT RESPONSES UNUSUALLY HIGH. CHECK FOR POOR RATE. (Wanda then selects the appropriate package and the next higher one as well.)

Some additional, more basic or specialized tests may be needed if a student scores exceptionally low, such things as elementary level tests or even a test to check his hearing.

4. If vocabulary raw score is 12 or lower:

   WEPMAN LISTENING TEST

5. If vocabulary raw score is below 15 and comprehension raw score is below 20:

   DURRELL ANALYSIS OF READING DIFFICULTIES

6. If number answered is less than 9 in comprehension or 20 in vocabulary:

   DURRELL ANALYSIS

Finally, we have instances where either the vocabulary or the comprehension score will be far higher than the other score. Our experience tells us that subsequent testing will bring the two closer together, often by moving them both. To take care of this extreme spread, and assume that the high score is too high and the lower score is too low, we included the instruction:

> If vocabulary and comprehension differ by over 20 %ile points and one is less than 30 percent of the other, PRINT the next lower package for the higher score and the next higher package for the lower score, along with the alert:
>
> WIDE SCORE RANGE

The Program in Action

It's impressive to students to take a test one day and the next day have a Texas OMNI 800 rattle off a string of remedial assignments especially tailored for that person alone. Of course, from the menu of materials presented, the instructor still picks and chooses what he or she determines is most effective, but having Wanda Wang remember everything that might be of use, and presenting it so systematically is a lifesaver.

We feel that our computerized approach gives us the best of both worlds: the unfailing memory and accuracy of a computer, the good judgement and skilled decision of an instructor. Anyone not wanting to include the "human touch" could, of course, develop more specific packages of materials and assignments, and have the computer just print the final program by itself. We don't recommend anything this canned, however.

We're still adjusting our packages and tinkering with the program, but after a full year's use at Muskegon Community College we can testify that while our computer-assisted diagnosis/prescription ain't perfect, it ain't bad.

Learning Skills and Learning environment: Relating Developmental Courses to Institutional Expectations and Demands

Sharon L. Smith
Janet J. Jackson
Indiana University

ABSTRACT

This type of affiliation between the Learning Skills Center and other departments of an institution has an important impact on the nature of the service provided, the clientele which uses the service, and, as the present discussion illustrates, the impact these programs have on the institution.

At Indiana University Bloomington, the Learning Skills Center is affiliated with the Reading Department in the School of Education as well as being an administrative unit. In addition to this affiliation, the Center maintains a close liaison with both the Special Services and Basic Skills programs which operate within the Undergraduate Life Division. The association with the graduate program in reading education provides two major benefits. One is that we develop our program of freshman level courses and services within the context of current reading theory and research. The other is that we can professionalize staff training and development by relating it to our graduate program. The link with those units providing services to nontraditional students ensures that our freshman program and trained staff serve those students most in need of help at an institution such as ours.

In this paper, we will discuss two outcomes from these opportunities that we believe have added depth to our program and increased its impact at Indiana University. These are both curricular developments, one a graduate course for instructors in college reading and learning, and the other a summer bridge course for freshmen likely to have trouble surviving in the rather competitive environment of an institution where more than 60 percent of the freshmen come from the top 30 percent of their high school class. Both of these courses--the one for instructors and the one for students--adhere to the principle that learning skills instruction must relate to the learning environment and experiences of the students for whom the instruction is provided.

A Graduate Course in Reading and Learning Skills Development

The major purpose of this course is to help graduate students build a knowledge and theory base for providing learning and academic support services. Also, it is important to provide experiences that prepare students for various aspects of a career in this area. These experiences include peer observation and evaluation of teaching, a module on implementation and administration of a center, participation in ongoing research by Center staff, and demonstrations by a variety of resource persons on teaching and research techniques.

Two projects which are especially important in helping new instructors understand the situation of many freshmen at I.U. are an introspective examination of the processes and strategies they use to understand a difficult and unfamiliar text, and an "ethnographic" investigation into a freshman course here, which includes class observation with "field notes," interviews of students and instructor, and examination of text materials. Through this experience, students develop skills for communicating with faculty, finding out what is really going on in the courses that freshmen take, and understanding the difficulties they might be having with their texts.

This naturalistic approach to acquiring information is also compared to more traditional paradigms for gathering and interpreting data in education, most notably surveys and experimental studies. For example, we recently were given the following statistics in a survey on faculty perceptions of freshmen skills conducted by a research unit in our institution.*

Importance of Reading Skills to Classroom Success

	Humanities N=33	Social Sciences N=28	Sciences N=16
Extremely important	79%	64%	38%
Important	18%	36%	56%
Unimportant	3%	0	6%
Not important at all	0	0	0

Ratings of Student Reading Skills

	Humanities	Social Sciences	Sciences
(1) Excellent	0	0	0
(2) More than adequate	24%	7%	6%
(3) Adequate	49%	64%	56%
(4) Less than adequate	21%	29%	19%
(5) Very poor	0	0	6%
(6) No response	6%	0	13%

Ratings of Student Proficiency in Specific Skills

	(1)	(2)	(3)	(4)	(5)	(6)
Understanding main idea	1%	22%	47%	17%	4%	9%
Comprehending significant details	0	8%	43%	34%	5%	10%
Ability to reach valid conclusion	0	4%	43%	30%	6%	17%
Ability to detect faulty reasoning	0	5%	23%	34%	5%	33%
Speed	0	0	43%	10%	0	47%

These figures tell us, generally, that faculty rate the value of reading skills high, especially in the humanities and the social sciences, but are not terribly enthusiastic about their students' practice of these skills, especially in the sciences. Ratings of the importance of and students' competence in study skills yielded this picture:

Importance of Study Skills to Classroom Success

	Humanities	Social Sciences	Sciences
Extremely important	46%	75%	56%
Important	49%	25%	31%
Unimportant	5%	0	0
Not important at all	0	0	13%

Ratings of Student Study Skills

Excellent	0	0	0
More than adequate	6%	4%	0
Adequate	55%	39%	44%
Less than adequate	27%	54%	31%
Very poor	0	4%	6%
No response	12%	0	19%

Basic Skills Programs at the University

	Yes	No
Humanities	88%	12%
Social Sciences	89%	11%
Sciences	69%	31%
TOTAL	84%	16%

This kind of information gives us direction, but it falls short of what we need to know in planning our instruction. Most obvious are such questions as what reading skills, exactly, are required in different courses, and how do instructors view study skills requirements for their classes? We can also read between the lines and see that faculty are concerned about students' reasoning powers, although they cannot articulate what these powers may be in such a survey. For this information, we go to other sources, such as Arons' (1979) excellent analysis of the kinds of reasoning and linguistic capacities implicitly expected of students by faculty.

In this article, Arons identifies fifteen reasoning capacities that college instructors tend to assume that students have, whereas in fact there is wide variation among students in their development of these processes. Of these, we have identified eight that we think can be taught in a learning skills course: (1) ability to organize and manipulate variables; (2) understanding the logic and syntax of propositional statements in natural English (i.e., not necessarily in mathematics or other symbolic notation); (3) ability to paraphrase text in one's own words, using one's own language to express meaning comprehended from other sources; (4) ability to assess completeness or adequacy of information, one's own or the text's; (5) distinguishing between observation (attending to explicit information) and inference (attending to implicit information); (6) separating the structure of an argument from its content and recognizing underlying assumptions of the structure; (7) ability to hypothesize or predict outcomes from partial information and then test predictions; and (8) developing awareness of one's own thinking processes.

In training new staff, the implementation of such skills is stressed, and new instructors are encouraged to try their hand at developing both teaching methods and teaching materials designed to help students apply such skills to content materials.

Another way in which the graduate course helps instructors seek in-depth information on student learning needs is the major project, the "ethmographic study" described briefly above. This project, although it involves interviews and observations, is not in any way evaluative. The purpose is simply to find out what is going on and what skills and strategies students actually need to bring to the learning situation. Through this project, to which we apply methods described by Spradley (1979), students gain valuable experience in relating to faculty and discipline-centered subject matter, so that learning skills are not taught in a vacuum. In addition, the individual studies become part of a larger data pool that grows from year to year at the Center, giving us a more and more secure information base from which to develop and modify our programs.

A Summer Bridge Program for High Risk Students

The design of this course is based on the premise that learning skills instruction must be related to actual content learning from the beginning, and that there is little value in trying to teach study techniques before students actually understand what is entailed in college level learning. Therefore, the course is built around two content modules, one in psychology and one in sociology, which provide a realistic experience for students preparing for a competitive freshman year. Each three-week module is prepared and presented by a faculty member in that discipline, and consists of two lectures, appropriate reading assignments, and a test over the material--the common ingredients of most freshman classes. The lectures are presented in a typical format for Indiana University, 300 students in one room, and the emphasis here is on developing listening and notetaking skills, using Pauk's (1974) Cornell method. In the small study skills classes (ranging from 5 to 16 students) taught by Learning Skills Center and Special Services staff, emphasis is placed on textbook learning strategies, vocabulary development, synthesizing inforamation from lecture and text, and test-taking.

The modules are authentic components from the courses that these professors will be teaching in the fall. Although they are both in the social sciences, they are quite different from each other and enable students to apply their learning techniques to different requirements. The psychology module is based on a textbook chapter on learning, one which is very technical as it goes into various types of conditioning, reinforcement, extinction, punishment, and other concepts which have been developed mainly from tightly controlled animal experiments. There are about 70 technical terms in the chapter we have been using, and the professor presents his material as a science rather than a social science. Students must adhere very closely to the material given and remember a great deal, but the test calls for applications to problems rather than memory, so understanding is the paramount task.

The sociology module, on the other hand, is on the topic of families and kinship relationships, and the text is a tradebook, a monograph of an ethnographic study in a poor black community. Since 80 percent of the students in this program are black, they have very personal reactions to this text, and this gives them the experience of sorting their own emotional responses out from the concepts to be learned. They are encouraged, at the same time, to bring their own experiences and ideas to bear upon the material, which they enjoy doing despite some problems with the implications of a white investigator reporting on a black community. The emphasis here is much more on broad ideas rather than on specific processes and terms as is the case with the psychology material.

The students in this program also get experience with two types of examinations: multiple choice for psychology, and essay for sociology. Again, they experience the difference between a test that calls for mastery of specific information and one that asks them to remember fewer specific concepts but to elaborate them quite fully with examples and reasoning. In the essay exam, students must be able to generate and compose their own answers, while in the multiple choice exam they must become quite astute readers of these kind of questions.

Within this context, we teach a set of study strategies that are applied first to psychology and then to sociology. These include making "key concept" cards, drawing diagrams of text information, using Vaughan's (1980) notion of "Construct," annotating their texts in a way that brings out different levels of ideas (overriding ideas, main supporting ideas, definitions and examples), writing summaries, and preparing for tests by reviewing and making up potential test questions.

Our professors furnish us with sample test questions, course syllabi, and other study aids. They also provide inservice for our instructors, where they explain how they present their material and how they think students should study it. We have been fortunate to have the same professors work with us for three years, the life of the program, and this has helped us greatly in developing and refining the basic premises upon which it is based.

As the course proceeds, students begin to think that they are actually taking psychology and sociology. They prepare seriously for the tests and treat the testing situation as if it were a major determiner of their grades, though it is not. In one sense, however, the experience is not realistic, because these high risk students are being compared among themselves, not with the regular college population that will constitute the majority of their classes in the fall. To counter this effect, we give them two grades on their tests: one that shows how well they did among their own group, and one that tells them how they would fare according to the professor's regular standards. In psychology, they tend to do poorly, which is a discouragement. However, we explain that this dry-run is a better way to find out that they must try harder than the first test in the fall. Also, the fact that they are experienced in these courses when they return for the regular semester should make an important difference.

In the fall we offer a follow-up course, which most of these students also take, which picks up and expands on the same type of information processing strategies that we taught in the summer, now with application to the students' own texts. At the same time, the staff of the Learning Skills Center continues to learn more itself about how students learn in the environment provided by the faculty at I.U. We view ourselves as a mediator between that world of knowledge and the background and experience that freshmen bring to the university. These two chores can sometimes be very far apart, but we cannot afford to lose sight of either side.

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REFERENCES

Arons, A. "Some Thoughts on Reasoning Capacities Implicitly Expected of College Students," in Cognitive Process Instruction, J. Lochhead and John Clement (Eds.), The Franklin Institute Press, Philadelphis, 1979.

Pauk, W. How to Study in College, Second Edition, Houghton Mifflin Company, Boston, 1974.

Spradley, J. The Ethnographic Interview. Holt, Rinehart and Winston, New York, 1979.

Vaughan, J. ConStruct procedure. Unpublished paper, presented at the Indianapolis Public Schools Social Studies Teachers Conference, June, 1980.

*Faculty Perceptions of the Basic Skills of University Freshmen, Bureau of Evaluative Studies & Testing, Indiana University, 1981

But Does It Transfer?

Lee McMillen
Winona State University
Cleo McMillen
St. Mary's College
Winona, Minnesota

ABSTRACT

Effective college level study skills in entering students are no longer assumed by knowledgeable teachers and institutions. The result has been the establishment of learning laboratories and various types of help programs. McMillan argues that to be effective these programs must teach study skills as part of a comprehensive, developmental program and must include adequate practice opportunities in order to internalize a number of critical attitudes as well.

Introduction

If intermediate students are taught how to use a study technique such as SQ3R, will they transfer the skill to their studies in content subjects? Likewise, is it practical to teach skills such as notetaking at this same educational level? Traditionally, the basal reader approach to reading instruction has been to introduce young students to basic reading skills such as finding main idea, recalling facts and details, determining inferential statements, following instructions, and noting sequence of events. Except in rare situations, it is unlikely that there are special materials at the elementary level to supplement the basal reader in order to teach study skills. Even more rare is the teacher who teaches intermediate age students those skills essential to study. Some believe this to be a trivial issue; on the contrary, the number of secondary and postsecondary students who are intellectually able but have academic difficulty is testimony to the fact that greater effort is needed to teach students how to study (Pauk, 1966).

What are the skills necessary to effective study?

Study skills should be an acknowledged part of the reading program (Townsend, 1963). Likewise, the acquisition of study skills is developmental (Scriven and Harrison, 1969), (Pauk, 1966). A study skills program should be a carefully planned sequence of experiences. Mahoney (1965) as part of a separate effort has developed an outline where the program of activities and skills starts with grade one and progresses through grade six.

> There is a vast array of books on how to study written for the older school child, and these books contain splendid suggestions: a quiet room; a definite time of day; a clear desk with pencils sharpened; shelves with reference books each in its proper place; the interest but not the domination of parents; a schedule that starts with the most difficult subject and finishes with the easiest. Who has not been impressed with such ideas and wished he had taken all of them more firmly to heart! (Northway, 1959:53).

Continuing, Northway argues that the home is where good work habits begin, but the school is also obligated to establish productive work habits. While neatness and orderliness are desirable, they are means, not ends. These traits are important as facilitators to effective study. Because of the content and style of writing, the concentrated data on a page of history, geography, science, or mathematics is much more difficult than narrative prose (Lipton and Liss, 1978), (Schubert and Torgerson, 1981), (Leibert, 1969). Given also that these subjects have abstract concepts and technical vocabulary for the reader to contend with, it should be apparent that the scholar will need to apply a different technique when reading the selection (Donlan, 1980), (Schubert and Torgerson, 1981), (Aulls, 1975). Indeed, Kaplan and Tuchman (1980) express that crucial to reading textbooks is knowledge of content vocabulary. Students with strategies for dealing with unknown words are more effective in content reading. On the contrary, stories in a child's basal reader, like that in a novel, may take pages to develop the plot and establish characterization. Typically, the elementary student learns how to read from the basal, but then may not associate the reading skills with those necessary for library work, or the learning about maps, graphs, and charts with studying in the content of social studies and science.

Far too often these teachings are introduced in isolation with the teacher apparently assuming that the student will automatically, as if by some divine guidance, make the transfer to the studying of a subject with specific content and vocabulary (Allington,1975).

> Upper-grade students are expected to study independently a number of hours each week, but few of them receive instruction from their teachers that proves helpful. Students who are exposed to study skills instruction often fail to employ it properly, either because they were not given sufficient practice or because they find a haphazard approach easier to use (Schubert and Torgerson, 1981:116).

Granted, some students are perceptive enough to establish the association; however, far too many need guidance along with practice in a program designed to help establish good study habits (Townsend, 1963), Robinson, 1961), (Butcofsky, 1971). Or as Allington (1975) points out, students who have not internalized the understandings of the effective use of study skills such as SQ3R may still employ previously acquired ineffective strategies within the SQ3R model. Even good readers were found to have inefficient reading methods and made good grades on the basis of superior intellect. Often those who demonstrated a high level of achievement in high school perform considerably below expectation as university freshmen. Part of this situation is probably due to lack of adequate training in learning skills at the secondary level (Butcofsky, 1971).

Where does the burden for instruction lie?

That the contemporary elementary and secondary schools are not adequately preparing students to study should be apparent according to the number of postsecondary schools that are developing learning and/or study skill centers (Maxwell, 1975). Townsend (1963) points out that more research is being conducted at the college level than with younger students. Obviously it must have been assumed in the past that anyone entering college or the university could surely study. What some fail to realize is that at that time only a select few advanced beyond junior high school, much less after high school graduation. Now the new open-door policy for state-supported colleges and universities, as well as declining enrollments, budgets, and inflation has placed a burden on the administration and faculty on how best to aid those who are academically disadvantaged. Although this new burden may be somewhat of a blessing as far as helping some young people come closer to the realization of their potential, it has at the same time created a dilemma in academe. Ironically, as Keetz (1978) discovered, many college students cannot read the very text designed to help them learn how to study. Taxpayers and private donors also are upset because as Hechinger (1978) argues, they have spent large sums of money to support higher education. What, then, is to be done not only with those secondary and college students who have seventh grade reading and vocabulary skills but who likewise cannot use the library, dictionary, table of contents, and index, or much less as Aaronson (1975) argues, listen and take notes? Castallo (1976) did not view it as totally bleak by stating thus

> Among the skills which are important for survival both as a student and as a citizen is that of being able to listen well and detect the

> important points a speaker is making. Students need not learn this by themselves, but can be given guidance. (Castallo, 1976: 289).

Compounding the problem is the additional fact that only a few isolated school systems have a program where the special reading and study skills are taught (Schubert and Torgerson, 1981). Even then, "instruction is rarely differentiated on the basis of reading ability" (Allington, 1975). Moreover, while Robinson (1961) and O'Donnell (1980) note that secondary school faculty felt ill-prepared to teach study skills, it is far too often true that secondary teachers will argue that their task is not to teach reading and study skills, as if their specific course content was definitive, and that they, as such, are teaching the terminal course in that subject. Part of the problem, according to Wagner (1965), is that there is no clear-cut definition on a national basis, as to what study skills should include.

What is the answer to the dilemma?

Although the furor over the "back to the basics" has somewhat subsided, those with the zeal are still pressing (Hechinger, 1978). But what are the basics--reading, writing, and mathematics? O'Donnell (1980) cites a definition in the ERIC Thesaurus and reports that those skills considered fundamental skills are the basics of later learning and achievement. Argument, therefore, is for elementary and secondary teachers to attack the problem of poor study skills by a large segment of the school population.

> Since reading at the junior and senior high school levels is not taught as a separate subject, content field teachers must assume additional responsibility in giving students how-to-study tips. For example, getting-to-know-your-textbook sessions can prove very profitable in bringing to students' attention ways in which their textbooks can help them study (Schubert and Torgerson, 1981:116).

Return to the basics may be shouted by critics of contemporary education, but in a study conducted at the elementary level, Austin and Morrison (1963) give unconvincing evidence for advocating that when they report there was only limited evidence of reading skills being taught in the content areas. Similarly, Johnson (1979) is in support. "The latest edition of Scott, Foresman is based on the principle that 'instruction is best when it's basic and natural and filled with delight' (Scott, Foresman 1977-78)."

Some schools (Stiles, 1963) offer in-service to their teachers in an attempt to have them introduce the SQ3R method of study to students. While there seemed to be evidence in junior high that encyclopedias and other reference books were being used and that students had shown increased interest in their studies, results at the secondary level were less positive. Stiles was not encouraged as noted here.

> Results in the senior high building are harder to detect. We feel that the teachers in this area have been slower to catch on probably because they have been more firmly indoctrinated

> in the old textbook method of trying to reach subject matter rather than in the philosophy of a subject-matter curriculum centered around abilities and the needs of individuals within a class (Stiles, 1963: 129).

While study techniques such as SQ3R may have merit, there seems to be little evidence that it is any more effective than other similar approaches to study. As Johns and McNamara (1980) suggest, even though SQ3R is a popular technique and is recommended repeatedly in the literature, there is little, if any, empirical evidence to support it over other study methods.

Effective study in Hoffman's (1958) view is the responsibility of the school. A purpose for study must be established such that the student becomes aware that good study habits come from inside the learner. It is not to be taught, but it is to be learned. Desire on the part of the learner is the major factor. Teachers are to assist the student in growth to understanding of the importance of the need for self-evaluation. Herber (1970) provides an outline to guide students through their study in the content subjects. Herber's concern is that students gain a feel for the process so that eventually they will be able to use the model independently. That there is a need for helping students to read better and improve their study skills is quite apparent. While effective college level study skills seem to have been assumed for students in the past, this belief no longer holds. Even good readers and likewise good high school students are not necessarily efficient studiers.

Argument has been presented for the development of organized programs beginning with primary students and continuing to the secondary level. Because of the competition for students' time, complexity of reading material, and the need to organize the studied material into a retrievable form, it is strongly urged that teachers assist learners develop an efficient style for study.

Complications arise, though, when the burden for helping students is placed on teachers without offering teachers some guidance. Programs and materials are scarce, basal readers are of little value, and as Askov, Kamm, and Klumb (1977) argue, teachers are ill-prepared to develop their own programs to supplement the curriculum already lacking in substance as far as study skills instruction is concerned. Teachers' training instruction is of little benefit because there is likewise little evidence that as undergraduates in preparation to teach, little information is made available. College textbooks are equally at fault; treatment usually includes a chapter devoted to discussion of content area reading, maps, graphs, book and library skills, and reading rate. As Askov, et. al., note: teacher education and college reading textbooks should be of a less cursory nature; time and effort should reflect the importance of the study skills area.

Summary

Process seems to be a key word in the literature related to study skills, i.e., students must learn a process. It is of little good to present study skills as techniques to be learned if they are presented too late, or if they are not part of a developmental program begun early in a child's school experience. Thus, while students may be able to find answers to comprehension questions in a basal reader, can they study independently in textbooks? Process, then, assumes an internalization of a vast number of attitudes as well as learning an array of skills necessary to concentrated study of a scholarly nature (Robyak, 1978). Introduction of study skills techniques should not assume that students will automatically transfer those techniques to their own studies or, in other words, incorporate them into their personal repetoire of means for study of content subjects. Unless study skills are introduced early, practice provided, and reinforced by competent teachers, it is quite unlikely that students will become efficient scholars.

BIBLIOGRAPHY

Aaronson, Shirley. "Notetaking Improvement: A Combined Auditory, Functional and Psychological Approach," Journal of Reading, 19:1, October, 1975.

Askov, Eunice M., Karlyn Kamm, and Roger Klumb. "Study Skills Mastery Among Elementary School Teachers," The Reading Teacher, 30:5, February, 1977.

Aulls, Mark W. "Expository Paragraph Properties That Influence Literal Recall," Journal of Reading Behavior, 7:4, Winter, 1975.

Butcofsky, Don. "Any Learning Skills Taught in High School?" Journal of Reading, 15:3, December, 1971.

Castallo, Richard. "Listening Guide--A First Step Toward Notetaking and Listening Skills," Journal of Reading, 19:4, January, 1976.

Donlan, Dan. "Locating Main Ideas in History Textbooks," Journal of Reading, 24:2, November, 1980.

Hechinger, Fred M. "The Back-To-The-Basics Impact," Today's Education, February-March, 1978.

Herber, Harold. Teaching Reading in the Content Areas. Englewood Cliffs, New Jersey: Prentice-Hall, 1970.

Hoffman, J. D. "Insight Into Effective Study," Education, 78:6, February, 1958.

Johns, Jerry L. and Lawrence P. McNamara. "The SQ3R Study Technique: A Forgotten Research Target," Journal of Reading, 23:8, May, 1980.

Johnson, Joyce Elaine. "Back to Basics? We've Been There 150 Years," The Reading Teacher, 32:6, March, 1979.

Kaplan, Elaine M., and Anita Tuchman. "Vocabulary Strategies Belong in the Hands of Learners," Journal of Reading, 24:1, October, 1980.

Keets, Mary A. "The Readability of Study Habit Books and College Students' Reading Ability," Journal of Reading Behavior, 10:1, Spring, 1978.

Leibert, R. E. "Homework and Study Habits," Clearing House, 43:7, March, 1969.

Lipton, Jack P. and Jody A. Liss. "Attitudes of Content Area Teachers Towards Teaching," Reading Improvement, 15:4, Winter, 1978.

Mahoney, S. "Basic Study Skills and Tools," Elementary English, 42, December, 1965.

Maxwell, Martha J. "Developing a Learning Center: Plans, Problems and Progress," Journal of Reading, 18:6, March, 1975.

Northway, M. L. "Let's Teach Children How to Study," Grade Teacher, 77:3, November, 1959.

O'Donnell, Holly. "ERIC/RCS," Journal of Reading, 24:2, November, 1980.

Pauk, W. "Reading or Studying! What's the Difference?" Education Digest, 32:2, October, 1966.

Pauk, W. "Study Skills! That's the Answer!" Reading Improvement, 10:3, Winter, 1973.

Robinson, F. P. "Study Skills for Superior Students in Secondary School," Reading Teacher, 15:1, September, 1961.

Robinson, H. Alan. "A Cluster of Skills: Especially for Junior High School," Reading Teacher, 15:1, September, 1961.

Robyak, James E. "Study Skills Versus Non-Study Skills Students: A Discriminant Analysis," Journal of Educational Research, 71:3, January/February, 1978.

Scriven, E. G. and Alton Harrison. "Let's Individualize Learning Skills," Peabody Journal of Education, 46:5, March, 1969.

Schubert, Delwyn and Theodore Torgerson. Improving the Reading Program. Fifth Edition, Wm. C. Brown Co. Publishers, Dubuque, Iowa, 1981.

Stiles, H. L. "In-Service Training for the SQ3R Reading Study Method," Journal of Developmental Reading, 6:2, Winter, 1963.

Townsend A. "Developmental Program in Study Skills?" Reading Teacher, 16, January, 1963.

Wagner, G. "What Schools Are Doing--Promoting Study Skills and Habits," Education, 85:6, February, 1965.

Annotated Bibliography of
Reading Tests

Joseph A. Fisher
Drake University

INTRODUCTION

The annotated test bibliography which follows is not intended to be a comprehensive list of all reading tests available or which might be valuable to the reading teacher at the high school, college, and adult levels. Only those reading tests which were especially designed or are specifically recommended as useful at those levels have been included.

To make the list as easy to use as possible, the tests included have been arranged in alphabetical order by test title and divided into five groups: Survey Tests in Reading, Diagnostic Reading Tests, Vocabulary Tests, Study Skills Tests, and Integrated Test Batteries. The Survey Test group contains only tests which provide a measure of reading speed, comprehension, and vocabulary. If a test provides a measure of any other reading skill in addition, it has been classified under Diagnostic Reading Tests. Vocabulary Tests includes those instruments which measure only vocabulary. The Study Skills Tests group includes tests intended to afford measures of a variety of learning skills peculiar to the accumulation and organization of knowledge derived from reading. Integrated Test Batteries includes groups of tests built around common norms groups and covering a variety of skills. They are designed to provide a broader profile of skill measures.

No evaluation of the relative merits of the tests included in the present bibliography has been attempted. Persons interested in evaluatory information and data regarding the statistical characteristics of the devices included are referred to the technical manuals supplied by the respective test publishers. The Mental Measurements Yearbook, (Burros Ed.) a series of books, is recommended as the most comprehensive single source for evaluations of reading tests and other psychological measurement devices which would be of value in preparing a complete clinical diagnosis. Tests and reviews relating specifically to the field of reading have been collected by the same editor in a single volume titled Reading Tests and Reviews, published by the Gryphon Press, Highland Park, New Jersey, 1968.

A directory of test publishers appears at the end of the bibliography.

Group I

Survey Tests in Reading

AMERICAN SCHOOL READING TESTS FOR SENIOR HIGH SCHOOLS AND COLLEGE FRESHMEN
Willis E. Pratt, Stanley W. Lore
Bobbs-Merrill Co., Inc., Test Division
1955
Grades 19-13, college freshmen

This test was designed to measure vocabulary, reading rate, and reading comprehension at grades 10 to 13. Test 1, Vocabulary, consists of 72 items arranged in order of increasing difficulty. Test 2, Reading Rate and

Understanding, consists of an article of about 1500 words and 20 multiple choice questions. Test 3, Paragraph Reading, consists of ten paragraphs of increasing difficulty, each followed by five multiple choice questions. Forms A and B are available, and results are expressed in percentiles.

COOPERATIVE ENGLISH TEST, THE
Educational Testing Service
1960 Revision
Forms 2A, 2B, and 2C for grades 9-12
Forms 1A, 1B, and 1C for college freshmen and sophomores

This test is divided into two parts. Part 1, Vocabulary, contains 60 synonym type items and has a time limit of 15 minutes. Part 2, Reading consists of a series of paragraphs followed by questions. There is a total of 60 items in part 2. Two scores are derived from part 2, speed and level of comprehension. Time, 25 minutes. Percentile band norms.

DIAGNOSTIC READING TESTS SURVEY SECTION
The Committee on Diagnostic Reading Tests, Inc.
Science Research Associates, Inc.
1947-1974
Grades K-13

The survey section of the Diagnostic Reading Tests requires 40 minutes of working time and contains three subtests; 1) General Reading (15 minutes), 2) Vocabulary (10 minutes), and 3) Comprehension (15 minutes). The general Reading section provides two scores, the usual reading rate and comprehension. The Vocabulary section consists of 60 items of the synonym vocabulary. The Comprehension section consists of four selections of the science and social science textbook types, and five questions each. A total reading score may also be derived. Group percentile and national percentile norms are available. There are eight forms of the test, A through H.

GTA TESTS OF READING
Herschel T. Manuel
Guidance Testing Associates, 1962
Grades 10-13

This test provides a measure of vocabulary, speed of comprehension, level of comprehension, as well as total reading ability. Part 1, Vocabulary (10 minutes), consists of 45 items; part 2, Speed of Comprehension (6 minutes), consists of 30 completion items; and part 3, Level of Comprehension (25 minutes), consists of 11 paragraphs with four or five questions. Total time is 41 minutes. Two forms of the test are available in English and two in Spanish. The Spanish and English tests are identical in content, and are designed to provide a common test series for use throughout the hemisphere wherever Spanish or English is taught. Percentile norms.

METROPOLITAN ACHIEVEMENT TESTS--
HIGH SCHOOL LANGUAGE TESTS
Walter N. Durost, Editor
Harcourt, Brace & World, Inc., 1963
Grades 9-12

The reading test of the Metropolitan Achievement Tests is divided into two parts, the first of which consists of three reading selections each followed by a set of questions; a total of 23 items. Part 2 consists of a full-page selection that the student reads and studies as he would if he were preparing a lesson. He then answers 17 questions on the material without referring back to the selection. Little premium is placed on speed of reading as such. Time, 36 minutes. Percentile norms. Two forms; IBM type card as answer sheet available.

MINNESOTA READING EXAMINATION FOR COLLEGE STUDENTS, THE
Melvin E. Haggerty, Alvin C. Eurich,
Revised Edition,
University of Minnesota Press, 1935

The test consists of two sections. The first is a 100-item vocabulary test; the second consists of ten paragraphs, each followed by three or four comprehension questions. Percentile norms. Time, 46 minutes.

NELSON-DENNY READING TEST, THE
M.J. Nelson, E.C. Denny,
Revised by James I. Brown
Riverside Publishing Co., 1960-81
Grades 9-16

This test consists of two parts, Part 1 is a 100-item vocabulary test. Part 2 is a comprehension and rate test consisting of eight paragraphs with four questions each. Time limits for parts 1 and 2 are 10 and 20 minutes respectively. Norms are expressed as grade equivalents of percentiles.

SCHRAMMEL-GRAY HIGH SCHOOL AND COLLEGE READING TEST
H.E. Schrammel, W.H. Gray
Bobbs-Merrill Company, Inc., 1940-42
Grades--high school, college

This test consists of 25 paragraphs followed by three to five objective questions concerning content. Total number of questions is 100. It is intended as both a survey and diagnostic measure. The test yields a reading rate, general reading comprehension, and a comprehension efficiency score at the junior and senior high as well as college freshmen levels. There are two forms of the test. Scores are interpreted as percentile norms for each grade. The comprehension efficiency score is a ratio between the student's gross comprehension score and his rate score. Time, 25 minutes.

Group II

Diagnostic Reading Tests

BOTEL READING INVENTORY, THE
Morton Botel
Follett Publishing Company, 1961-70
Grades 1-12

This informal test is really an inventory designed to provide a measure of the student's ability to recognize and comprehend words, and his knowledge of basic word-attack skills. The complete inventory consists of three tests; 1) Phonics Mastery Test, divided into four levels which may be used as a screening device beyond the third grade level; 2)A Word Recognition Test; 3) A Word Opposites Test. The latter may be used beyond the third grade either as a reading or listening test. All words are presented in isolation. It is an untimed test. The table of standards is based on per cent of accuracy chart provided, which yields highest instructional level and highest potential level.

BROWN-CARLSEN LISTENING COMPREHENSION TEST
James I. Brown, G. Robert Carlsen
Harcourt Brace Jovanovich, 1955
Grades 9-12, college, adult

This test is an objective measure of the ability of students to comprehend spoken language. It takes into account five listening skills: 1) Immediate Recall, the ability to keep a sequence of details in mind until a question is asked that requires thinking back over the sequence; 2) Following Oral Directions; 3) Recognizing Transitions, which measures awareness of the function of transitional words and phrases within sentence contexts; 4) Recognizing Word Meanings by deduction of meaning from context; and 5) Lecture Comprehension--listening for details, central idea, drawing inferences, understanding organization, and noting the degree of relevancy: Norms and standard scores.

CALIFORNIA ACHIEVEMENT TESTS
(Advanced Form)
Ernest W. Tiegs and Willis W. Clark
Reading Test, 1957 Edition, 1963 norms
California Test Bureau
Grades 9-14

This examination is divided into two tests and seven sections. Test 1, Vocabulary, consists of synonym type items covering mathematics, science, social science, and general vocabulary. Administration time is eight minutes. Test 2, Reading Comprehension, contains three sections; Following Directions is composed of 15 paragraphs each followed by a question; items are based on mathematics, language, and science type reading materials. The Reference Skills Section consists of 27 items. The last section, Interpretation of Material consists of five short articles on geography, economics, science, psychological tests, philosophy, and a number of questions on each selection, 45 in all. Testing time for test 2 is 60 minutes. Percentile and grade norms are provided as well as a student profile. The profile features a diagnostic analysis of learning difficulty.

CALIFORNIA PHONICS SURVEY
Grace M. Brown, Alice B. Cottrell
California Test Bureau, 1963
Grades 7--college

This is a test of phonetic adequacy consisting of 75 items. It is divided into five test exercises, largely, to provide variety in presentation and obviate fatigue. All items offer a choice of five responses including a "none." Exercise 1 has 25 items and requires the student to locate the printed form of a word spoken to him. Exercise 2 contains 11 items, each based on a short sentence ending with an imaginary name or term. The student must mark on his test the printed form of the imaginary term. Test Exercise 3 uses real words in each of ten items which require the student to identify the printed form of the spoken word. Emphasis here is on sound perception, not comprehension. Test Exercise 4 contains 14 items based on rhyming words. The student is asked to select the printed response which rhymes with the spoken stimulus words and sounds to himself. None of the 15 items correctly spells a word, but one in each item sounds like a real word. The student must mark this term.

It is an untimed test requiring about forty-five minutes to administer. Two forms are available. A student profile with cut-off scores is provided. Total score consists of total number of right responses; diagnostic scores reported by number wrong in each diagnostic category.

DAVIS READING TEST
F.B. Davis and C.C. Davis
The Psychological Corporation, 1962
Series I, grades 11-13
Series II, grades 8-11

This test is designed to measure five categories of reading skills:

1. Finding answers to questions answered explicitly or in paraphrase in a passage.
2. Combining ideas in a passage and grasping its central thought.
3. Making inferences about the content of a passage or the purpose of point of view of the author.
4. Recognizing the tone or mood of a passage and the literary devices used by the author.
5. Follow the structure of a passage.

The test does not provide separate scores in each of these categories, however. It consists of a series of passages of varying length and literary type followed by 80 completion type comprehension items divided into two 40-item parts. The test comes in two series, each having four forms. Series I is designed for grades 11 to 13; series II, for grades 8 to 11. Time for the test is 40 minutes. It yields percentile norms by grades. The first part provides a level of comprehension score; both parts are taken into account in determining the speed of comprehension score.

DIAGNOSTIC READING SCALES, THE
George D. Spache,
California Test Bureau, 1963-72
Grades 1-8, retarded readers--high school

This is a series of integrated tests designed to provide evaluations of oral and silent reading skill and auditory comprehension. The tests are individually administered. The battery consists of three word recognition lists, 22 reading passages of graduated difficulty, and six supplementary phonics tests. The word lists are used to test word recognition skills as well as to determine the level at which to start the student in the reading passages. The passages include narrative, expository, and descriptive passages drawn from natural and physical sciences, social studies, and children's literature. The comprehension questions for each passage stress comprehension of facts and inferences rather than memorization, and sample the student's ability to interpret feelings and actions of characters, draw conclusions and inferences, recognize stated facts in paragraphs, and recall specific details. The passages yield three reading level scores: 1) oral reading or instructional level, 2) silent reading or independent reading level, and 3 auditory comprehension or potential reading level. Each phonics test is devised to measure a specific phonics skill, and while emphasis is placed on mastery, a scale is provided which makes it possible to relate performance to an approximate grade level.

GATES-MCKILLOP READING DIAGNOSTIC TESTS
Arthur I. Gates, Anne S. McKillop,
Columbia University, Teachers College
Bureau of Publications, 1962 Revised
Grades--all levels

This is a battery of individual diagnostic tests covering: 1) Oral Reading, 2) Words--Flash presentation, 3) Words--Untimed Presentation, 4) Phrases--Flash Presentation, 5) knowledge of Word Parts; Word Attack, 6) Recognizing Visual Form as Word Equivalents of Sounds, 7) Auditory

Blending, and 8) Supplementary Tests: Oral vocabulary, syllabication, and auditory discrimination. Results are expressed as "very low" or "low", "medium," and "high" with respect to actual grade placement. Two forms available. Examiner is encouraged to choose for each case only those tests needed for diagnosis.

GRAY ORAL READING TESTS, THE
William S. Gray, Helen M. Robinson, Ed.
Bobbs-Merrill Company, Inc., 1963-67
Grades, first grade to college

The two major functions of these tests are to provide an objective measure of growth in oral reading and aid in the diagnosis of oral reading difficulties. The tests consist of a series of 13 paragraphs arranged in order of increasing difficulty. Types of reading errors are recorded to gain insight into the type of instruction needed by the student. The comprehension questions over each passage require only literal meaning and, chiefly, details of what has been read. Four forms of the test are available. In addition to the qualitative observation made during the oral reading, three objective measures are recorded for each passage; errors made, time in seconds required to read the passage, and four comprehension questions over the passage. Grade equivalent norms. Consumable booklet.

IOWA SILENT READING TESTS
Roger Farr, Coordinating Editor
Harcourt Brace Jovanovich, Inc., 1972

The 1972 edition of the Iowa Silent Reading Tests is designed on the premise that silent reading is a multifacited ability best measured by tests that survey several reading behaviors. The behaviors assessed include vocabulary, reading comprehension, use of reference materials, skimming and scanning for specific information, and speed of reading with comprehension.

Though many features of the previous editing have been retained, the 1972 edition offers a completely new series of tests with new content format and norms.

The level two test of the ISRT consists of four tests: vocabulary, reading comprehension, directed reading, and reading efficiency. Test 1: Vocabulary, consists of 50 items designed to assess the depth, breadth, and precision of general reading vocabulary. The student must choose from among four options the nearest synonym to the stimulus word.

Test 2: Reading Comprehension, consists of 50 items designed to measure the ability to comprehend literal detail, to reason in reading, and to evaluate what is read. Part A (38 items) requires responses based on six short passages to which the student has ready access. Part B (12 items) tests short-term recall of a longer passage requiring answers to questions about what has been read without looking back. Test 3: Directed Reading, consists of 44 items which measure work-study skills. Part A (24 items) measure ability to use the dictionary, library and reference materials. Part B (20 items) assesses ability to skim and scan for specific information using an article which is too long to be read and necessitating the use of skimming and scanning methods to locate answers in time. Test 4: Reading Efficiency is a speeded test of six short passages. It contains 40 items which measure the student's ability to read rapidly with understanding when material is easy. It employs a modified cloze procedure.

Norms are provided in stanine, percentile and standard scores. A unique feature of the ISRT is the reading efficiency index which is designed to provide a convenient means of classifying students according to their ability to read easy materials quickly and accurately. The R-E index is determined by comparing the number of correctly answered items to the number of attempted items. The index is specific to the level of the test taken. A pupil profile form is available for reporting results.

KELLEY-GREENE READING COMPREHENSION TEST
Victor H. Kelley, Harry A. Greene
Harcourt Brace Jovanovich, 1952-55
Grades 9-13

This test is designed to provide an over-all measure of reading comprehension for high school and college freshmen. It provides measures of three abilities; 1) ability to read paragraphs with comprehension, 2) ability to find answers to questions, and 3) ability to retain what is read. An estimate of reading rate may also be obtained. Test 1, Paragraph Comprehension, consists of nine paragraphs dealing largely with general science and social science content, each followed by five multiple choice questions. Time limit is 20 minutes.

Test 2, Directed Reading, consists of three selections approximately five hundred to six hundred words long, also dealing with general science and social science content. There are 24 questions for each selection. Time limits; three minutes for reading each selection and eight minutes for answering each set of questions. This section also provides a measure of reading rate based on the total number of sentences read in one minute in each of the last two selections.

Test 3, Retention of Details, measures retention of details of the three selections read in part two. It consists of 35 multiple choice items to be answered from memory. Time limit for this part is ten minutes. Total time for test is 75 minutes. Percentile norms for beginning and end of grades 9 to 12. Three forms of test are available. An Expectancy Chart is available which will show the typical relationship between mental ability tests and reading achievement as measured by this test.

MINNESOTA SPEED OF READING TEST FOR COLLEGE STUDENTS
Eurich
University of Minnesota Press, 1936
Grades: college

The purpose of this test is to measure reading rate. The test consists of 36 short paragraphs into each of which an absurd statement has been inserted. The reader is to cross out that statement. Time for the test is six minutes. Percentile norms.

NATIONAL ACHIEVEMENT TESTS
High School Reading Test
R.K. Speer; S. Smith
Acorn Publishing Company, 1952
Grades 7 to 12 and college

This test provides a measure of vocabulary, word discrimination, sentence meaning, noting details, and interpreting paragraphs. It is untimed; requires 40 minutes to administer. Available in two forms. Median grade norms are available through college sophomore levels.

READING DIAGNOSTIC RECORD FOR HIGH SCHOOL AND COLLEGE STUDENTS
Ruth Strang, et. al,
Teachers College. Columbia University
1952
Grades--high school and college

This is an individual record booklet providing space for summarizing information derived from a variety of sources. It contains suggestions for information to be derived from testing, interviewing, or observation as well. The parts of the record are: 1) Identifying data, 2) Summary of Results of Standardized Tests, 3) Summary of Scholastic Achievement, 4) Medical Examination and Reports of Physical Condition, 5) Developmental and Educational History, 6) Present Reading Interests, 7) Other Interests and Activities, 8) Present Reading Status, 9) Summary, 10) Recommendations, 11) Procedures Used, and 12) Follow-up.

READING VERSATILITY TEST
A.S. McDonald, et. al.
Educational Developmental Laboratories
1961-68
Grades 6-16

The Reading Versatility Test is a standardized test of ability to read in a task-oriented manner. It provides measures of three indices of reading ability: 1) Comprehension, 2) Reading Rate, and 3) Ratios, a measure of how well the reader can vary his approach for different reading technique. The first is read carefully and thoroughly, the second for main ideas only, and the remaining sections are to be skimmed or scanned in order to answer advance questions. The sections are untimed. The tests are available on two levels, basic (grades 6 to 10) and advanced (grades 11, 12, college, and adult). There are two forms at each level. Appraisals of Reading Versatility (advanced) in two forms are available for school and non-school use.

An Eye-Movement Photography version of basic forms A and B is available to be used with a special platen in the Reading Eye camera, All forms and levels of these tests have been carefully equated both as to content and readability level.

SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS: LISTENING
A. Berry, et. al.,
Cooperative Test Division
Educational Testing Service, 1956-57
Level 1, college; level 2, grades 10-12

The STEP Tests actually constitute an achievement battery covering six learning areas; reading, writing, listening, social studies, science, and mathematics. The complete battery is available at four different ability levels. Level 1 is for college; level 2 is for grades 10 to 12.

The listening test measures three main types of listening skills; plain sense comprehension, interpretation, and evaluation applications for five types of material directions; explanation, exposition, narrative, argument-persuasion, and aesthetic material.

The test is administered in two parts of 35 minutes and 36 questions each. Percentile band norms and converted scores available. Classification of items makes possible detailed diagnosis for special cases. Two forms of the test available at each level.

SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS: READING
C. McCullough, et. al.,
Cooperative Test Division
Educational Testing Service, 1956-72
Level 1, college freshmen and sophomores
Level II, grades 10 to 12

The STEP Reading Test is actually a part of an achievement battery covering six learning areas; reading, writing, listening, social studies, science, and mathematics. It is prepared for use at four ability levels. Level 1 is for college; level 2 is for grades 10, 11, and 12.

The reading test measures five comprehension skills and seven types of reading material. The skills are reproducing ideas translating ideas and making inferences, analyzing motivation, analyzing presentation, and criticism. The types of material include directions and announcements, information and explanation, letters, stories, poetry, opinion interpretation, and plays. Each reading selection is followed by a number of suitable multiple choice questions. The test is divided into two 35 minute parts of 35 questions each. Detailed diagnosis of special cases is possible using the classification of STEP items provided in the administrator's manual. Two forms are available at each level and converted scores and percentile band norms are provided.

SRA READING RECORD

G.T. Buswell
Science Research Associates, Inc.
1947-59
Grades 6-12

The SRA Reading Record examines ten basic reading skills and yields an easily interpreted profile of use to both teacher and student. The skills investigated include rate of reading, comprehension, paragraph meaning, directory reading, map-table-graph reading, advertisement reading, index reading, technical vocabulary, sentence meaning, and general vocabulary. Each test is separately timed; total time is 28 minutes. It has percentile norms.

TESTS OF ACADEMIC PROGRESS

Dale P. Scannell, et al.
Houghton Mifflin Company, 1964-66
Grades 9-12

Test 4 of the Tests of Academic Progress is designed to measure student competency in reading. It consists of a number of rather short reading selections followed by comprehension questions. The content of the passages deals with a wide range of topics such as history, science, human relations, economics, and geography. The questions require the student to discover meanings rather than recall or locate information, and are classified into four broad categories; identification of explicitly stated facts, details, and relationships; comprehension of information which has been identified; application of information in drawing conclusions and forming inferences; and evaluation of the theme or purpose of the writer. The time is 60 minutes. Percentile norms. IBM scoring is available.

TINKER SPEED OF READING TEST
M.A. Tinker
University of Minnesota Press, 1955
Grades 7 to 16

This test is designed to provide a measure of speed of reading as a single variable uncomplicated by comprehension difficulties. Test is available in two approximately equivalent forms. Each consists of 450 items of 30 words each so arranged that one word in the latter part of the item spoils its meaning. The reader is to locate this word and cross it out as quickly as possible. Time allowed can be determined by the administrator. Percentile norms are available for 5, 10, and 30 minute time limits.

TRAXLER HIGH SCHOOL READING TEST
Arthur E. Traxler
Bobbs-Merrill Company, Inc., 1938-67
Grades 10, 11, and 12

The test is divided into two parts. Part 1 measures reading rate and comprehension. Rate measures are taken at 150 and 300 seconds. Part 2, a test of main ideas in paragraphs, consists of 30 paragraphs adapted from textbooks in social science and natural science, each followed by four statements, one of which embodies the main idea of the paragraph. Essentially a power test, but suggested time limits on parts 1 and 2 are 20 and 25 minutes respectively. Percentile norms.

WATSON-GLASER CRITICAL THINKING APPRAISAL
Goodwin Watson, Edward M Glaser
Harcourt Brace Jovanovich, 1942-64
Grades 9-12, college, adult

This test is designed to provide problems and situations which demand the application of some of the more important abilities involved in critical thinking.

It serves as a measure of factors involved in the ability to think critically and as a tool to aid in developing that ability. The test consists of a short statement followed by five comments about the statement. The student is required to decide whether the comment is true, probably true, not known from data given, probably false, or false. There are five subtests: 1) Inference, 2) Recognition of Assumptions, 3) Deductions, 4) Interpretation, and 5) Evaluation or Arguments. It is an untimed test usually taking about forty-four minutes to complete. There are two forms, and it has percentile norms.

WESTERN RESERVE UNIVERSITY READING TEST
Psychological Research Services of
Western Reserve University Press, 1963
Grades--high school, college, and adult

This test was designed to measure "pure" speed of reading. It consists of seven consecutively longer reading selections followed by a series of five comprehension questions. Each selection must be read within two minutes. Available in forms A and B.

Group III

Vocabulary Tests

DUROST-CENTER WORD MASTERY TEST
Walter Durost, Stella Center,
Harcourt Brace Jovanovich, Inc. 1951-52
Grades 9-13

This test is designed to serve two purposes; 1) provide a measure of general vocabulary level, and 2) to measure the extent to which a student is able to learn the meaning of unknown words from context. It is given in two parts.

Part 1 is a 100-word multiple choice vocabulary test. Part 2 presents the same 100 words in context which should assist the student in making his choices. Time for part 1 is 25 minutes. Time for part 2 is 35 minutes. There are two forms. It provides percentile norms and standard scores.

NEW STANDARD VOCABULARY TEST
M.M. Bryan, et al
Readers Digest, 1955-63
Grades 7-12

This test is designed to measure the scope of students' vocabulary. It consists of 125 stimulus words used in context with multiple choice answers. There are six forms and the time is 30 minutes. Percentile norms for grades 9 to 12.

PEABODY PICTURE VOCABULARY TEST
Lloyd M. Dunn
American Guidance Service, Inc.
Ages 2½ to 18

This test is designed to provide a well-standardized estimate of a subject's verbal intelligence through his hearing ability. It has particular value and validity for nonreaders and remedial reading, and is well suited to subjects suffering from speech and motor handicaps and certain vision deficiencies because neither speech nor pointing is essential to administration. The test consists of 150 words and as many cards presenting four pictures each. Age and percentile norms. Two forms are available.

SANDERS-FLETCHER VOCABULARY
Gwen Fletcher and M.W. Sanders,
Bureau of Educational Measurements
Kansas State Teachers College, 1964
Grades 9-12

This is a survey achievement test

intended for use as a measure of vocabulary efficiency. It is divided into four parts of 25 completion type items each. Part 1 contains definitions of words. Part 2 has closely related words. Part 3 has meaning of words. Part 4 has closely related words. The time is 40 minutes. There are two forms, A and B, and two tests for each form. Percentile norms.

SURVEY TESTS OF VOCABULARY
L. J. O'Rourke
Psychological Institute, 1931-48
Grades 3-12

This test measures the vocabulary scope of students. It contains 100 completion type items. There are two forms with percentile norms. The time required is 20 minutes.

WIDE-RANGE VOCABULARY TEST
C.R. Atwell, F.L. Wells, 1937-45
The Psychological Corporation
Grade 3-adults

This test provides a rapid and accurate measure of scholastic intelligence for literate persons. The list consists of 100 items of the sentence completion type. Form B presents the stimulus words in order of difficulty. Form C presents them in alphabetical order. It is untimed. Age norms for raw scores are provided.

WORD CLUE TEST
S.E. Taylor, et al
Educational Development Laboratories, 1962
Grades 7-13

The purpose of this test is to determine a student's functional vocabulary level; the level at which he can use context to determine word meaning.

Fisher

The test contains a series of 98 short paragraphs, 14 for each level from 7 through 13, in which one word is italicized. The student must select the best synonym for this word. There are four forms of the untimed test which takes approximately forty-five minutes to administer. Separate answer sheets. Level at which student misses three or more words represents his functional level. Workbooks for each level are available for instructional purposes. Level score and percentile norms available.

Group IV

Study Skills Tests

BENNETT LIBRARY USage TEST
Bennett, Schrammel
Bureau of Educational Measurements
Kansas State Teachers College, 1947
Grades 9-12, college

This test was compiled as an achievement test to evaluate knowledge concerning library organization and practice. The test consists of 130 true-false type items relating to such general topics as the book, catalog, Dewey Decimal Classification, library vocabulary, references, etc. Two forms available. Timed, 50 minutes. It has percentile norms.

CALIFORNIA STUDY METHODS SURVEY
Harold D. Carter
California Test Bureau, 1958
Grades 7-13

This test is a self-report inventory designed to reveal the essential nature of the study methods and attitudes of students. The test consists of 150 yes or no items which reflect consistent differences between the study methods and attitudes of good and poor students. It yields five scores; Attitudes toward School, Mechanics of Study, Planning and System, and Verification Untimed, but takes about 25 minutes. Yields percentile norms and student profile.

CORNELL LEARNING AND STUDY SKILLS INVENTORY, THE (CLASSIC) College form.
Walter Pauk, Russell Cassel
Psychologists and Educators, Inc., 1971
Grades 13-16

This inventory is designed to provide information on seven variables which experience has associated with inefficient or ineffective study habits and attitudes. Nine scores are derived; goal orientation, activity structure, scholarly skills, lecture mastery, textbook mastery, examination mastery, self-mastery, a total study score, and a reading validity score. The last is a means of determining whether responses are logically consistent as a means of assessing reliability of responses.

Students respond to statements by indicating to what degree the statement applies to them; seldom, sometimes, frequently, usually, never. Time required is about 30 minutes for most students. Raw scores are entered on the student profile sheet which indicates percentile rank automatically.

COOPERATIVE DICTIONARY TEST
S.D. Melville
Educational Testing Service, 1952
Grades 7-12

This test is designed to measure a student's knowledge of and ability to use the dictionary. Four aspects of of dictionary usage are examined; alphabetizing, 20 items; pronunciation, 10 items; meaning, 10 items; and spelling, 10 items. The test materials include a sample dictionary and separate answer sheet. Subscores can be obtained. It takes about twenty minutes working time. It yields percentile norms.

SPITZER STUDY SKILLS TEST
Herbert F. Spitzer
Harcourt, Brace Jovanovich, 1955
Grades 9-13

The test is designed to measure student ability to use five work-study skills: 1) Dictionary, 2) Index, 3) Locating Sources of Information, 4) Understanding Graphs, Tables, and Maps, 5) Organizing Facts in Note Taking.

Test one consists of 26 items based on entries in a sample dictionary. Items deal with pronunciation, word meaning, usage, spelling, derivation, and other available information. Time, 15 minutes. Test 2 contains 26 items dealing with index entries of the sort found in library and catalogs and general reference works. Many items involve inferences made from information found on the entry card. Time, 15 minutes. Test three consists of a series of charts, tables, maps and graphs, and questions. There is a total of 43 items and the time allowed is 35 minutes. Test 4 has 24 questions concerned with the choice of reference works to be consulted for certain items of information. Time, 10 minutes. Test 5 is optional and provides an objective measure of the ability to select and organize the important facts from among those given in four reading selections. Certain phrases expressing various ideas are underlined and numbered in these selections. The student places these numbers in the outline on his answer sheet. Time, 30 minutes. Percentile norms and individual profile charts available. Two forms.

SURVEY OF STUDY HABITS AND ATTITUDES (BROWN-HOLTZMAN SSHA)
William Brown, Wayne Holtzman
The Psychological Corporation, 1953-67
Grades 9-12, college

This is a self-evaluation inventory. The purposes of the test are:

1. To identify students with study habits and attitudes which differ from those of good students.
2. Aid in understanding students with academic problems.
3. Provide a basis for helping these students realize their best potentialities.

The survey requires the student to rate himself on a 75-item inventory using a five-point scale. It can be hand or machine scored. A separate counseling key identifies those responses which differ from responses given by students of high scholastic achievement. Male and female keys. Percentile norms. Time required is about twenty minutes.

WRENN STUDY HABITS INVENTORY
C.G. Wrenn
Stanford University Press, 1941
Grades, high school, early college

This inventory is a weighted check list of 28 items covering specific study habits and attitudes characteristic of good and poor students. The list is subdivided into four parts:
A) Reading and Notetaking Techniques,
B) Habits of Concentration,

C) Distribution of Time and Social
Relationships in Study, and
D) General Habits and Attitudes of Work.
Time, approximately twenty-five minutes.
Median score norms.

Group V

Integrated Test Batteries

McGRAW-HILL BASIC SKILLS SYSTEM TESTS
CTB/McGraw-Hill, 1970
Grades, 11-12, college freshmen and sophomores

The MHBSS is a battery of six tests designed to provide information about the strengths and weaknesses of students in six basic skills areas; reading, writing, spelling, vocabulary, study skills, and mathematics. They can be used as a total battery or any number can be used in combination or independently, depending on the needs of the students. It may be used along with other tests in an entrance battery and used to assist in the course placement or referral to special remedial services.

The test battery is designed to provide teachers, counselors, and the students, themselves, with a profile indicating particular strengths and weaknesses, and specific information regarding appropriate developmental or remedial instructional material. Subscores in each skill are not intended as a substitute for clinical diagnosis, but are useful as screening devices. Tables of percentiles are available for three performance groups: college bound high school juniors and seniors, two-year college students, and four-year college freshmen and sophomores. The use of these tests is complementary with but not restricted to the McGraw-Hill Basic Skills System learning materials. The contents of the tests is drawn mostly from beginning texts in college subject matter fields.

Time requirements: Working time for each test is as follows: reading, 66 minutes; writing, 45 minutes; spelling, 20 minutes; vocabulary, 12 minutes; study skills, 46 minutes; and mathematics, 42 minutes. All except the reading test can be given in the usual 50 minute class period. The reading test may be split into two class periods conveniently with parts 1 and 2 given in one period and part 3 in the second period.

There are five options for test scoring to suit whatever facilities are available. The derived scores available are percentiles, stanines, and standard scores. Optional service can provide the administrator with frequency distributions, IBM research cards, and additional class record sheets when necessary.

The tests have been developed with two parallel forms, A and B. They have been normed according to several reference groups, and tables are provided so that scores on the two forms can be directly compared. Either form can be used as a pre-test or as a post-test. Small differences that result from selection of items in Form A or Form B are taken care of by the provision of separate norms tables for each form.

READING TEST:

The CTB/MHBSS Reading Test is designed to measure the general level of reading skills of college bound high school juniors or seniors, two year college students, and freshmen and sophomores at four year colleges and universities, and suggest specific skill-oriented materials. The skills tested are those most relevant to academic success. Reading selections used in the test are taken directly from textbooks. The test is divided into three parts: reading rate and comprehension, skimming and scanning, paragraph comprehension. Each part is separately timed. The student has 16 minutes for part 1, 10 minutes for part 2, and 40 minutes for part 3.

Part 1, reading rate and comprehension, contains two reading selections with ten items each and yields four scores: 1) Reading rate of an easy selection in three minutes; 2) Reading rate of a difficult selection in three minutes; 3) Flexibility score (the difference in words per minute between the reading rate of an easy selection and the reading rate of a difficult selection; and 4) Retention score on a twenty item score.

Part 2, Skimming and scanning contains 30 items to test skimming, a high speed reading like process in which a general comprehension is desired; and scanning, a process of searching material for specific information. The score is the number of correct answers selected within a ten minute time limit.

Part 3, Paragraph comprehension contains five reading passages with five comprehension items per passage and measures the following skills: 1) Recognition and understanding of the main idea; 2) Recognition of details and understanding of their importance and function; 3) Discrimination between principles and their application; 4) Discovery of paragraph organization and structure; 5) Discrimination between fact and opinion, recognition of tone and intent, and judgment of validity or arguments; and 6) Study type reading; interspersed among the five longer passages are five shorter passages with one item each; these items measure factual knowledge and are similar to what a student can expect on an objective test based on a course textbook.

A single score will represent general paragraph comprehension; however, the student instruction sheet will show a performance on each of the item types and will aid in selecting appropriate learning materials.

WRITING TEST:

The CTB/MHBSS Writing Test is divided into three parts, each separately timed and yielding a separate score. The three parts are designed to measure the student's ability to recognize errors in punctuation, capitalization, and grammar (part 1--30 items); to recognize types of sentences in grammatically correct sentences, and to understand the relationship between sentences (part 2, 24 items); and to construct effective paragraphs (part 3, 12 items). The content of the passages in the writing test is appropriate and appealing to the age group for which the system is intended.

SPELLING TEST:

The CTB/MHBSS Spelling Test is a 50-item recognition type spelling test. The task is to identify words that are misspelled in the context of a sentence.

Each item consists of four words ending "non-wrong" responses.

The words used in constructing the items were taken from a collection of eight studies of problem words. The misspelled words appeared in the way they are most frequently misspelled by college freshmen according to a study by Pollock. The items in each form of the test are arranged in order of increasing difficulty.

VOCABULARY TEST:

The CTB/MHBSS Vocabulary test measures two aspects of vocabulary skill. The first part of the test measures knowledge of word meanings. The second part measures knowledge of word parts.

The words selected for section 1--word knowledge, were chosen for their usefulness to college students. They were taken from a study of terms used in beginning textbooks in natural science, social science, biological science, and humanities.

The words in section 2--word parts, are artificial words created from word parts with well-established meanings. They were devised from studies of the utility of affixes and roots.

Section 1 contains 30 items. Section 2 consists of 25 items. In each section the items are arranged in order of increasing difficulty.

STUDY SKILLS TEST:

The CTB/MHBSS Study Skills Test is designed to test study habits, attitudes, and skills. The less regimented schedule of college as compared to high school probably poses problems and adjustments to every new college student. This test is intended to indicate the readiness of the student to make the transition from high school to college--an environment where he must evaluate new ideas, develop correct study techniques, and make efficient use of his time.

This test is divided into five parts, each separately timed and yielding a separate score. The test is designed to measure problem-solving ability (Part 1--15 items), mastery of underlining techniques (Part 2--20 items), proficiency in using the library (Part 3--20 items), and study skills information (Part 4--20 items). Part 5 is a self-report survey of study habits and attitudes. Called Inventory of Study Habits and Attitudes, this part requires an additional 10 minutes to complete.

MATHEMATICS TEST

The CTB/MHBSS Mathematics test measures the student's general level of competence in the mathematics that is a prerequisite to college level mathematics courses.

The test is divided into three parts: Arithmetic, Elementary Algebra, and Intermediate Algebra. All topics commonly included in the instruction of these levels of mathematics have been sampled in developing the test. Each section of the test consists of 20 items which are arranged in order of increasing difficulty.

ADULT BASIC LEARNING EXAMINATION

Bjorn Karlsen, Richard Madden,
Eric F. Gardner
Harcourt Brace Jovanovich, Inc., 1967-71
Grades 1 through adult

The Adult Basic Learning Examination (ABLE) is a battery of tests designed to measure the level of educational achievement among adults. Although the examination is designed for use with adults and consists of items with adult content, it may be used to assess achievement as low as first grade. ABLE was developed to fill the need for an instrument to determine the general educational level of adults who have not completed formal eighth-grade education, as well as for use in evaluating a number of efforts to raise the educational level of these adults.

In order to cover as much as eight years of school achievement, it was necessary to develop two batteries, Level I (Grades 1-4) and Level II (Grades 5-8). At each level, ABLE includes the following tests: Vocabulary, Reading, Spelling, and Arithmetic. Each level has two forms, A and B, which are comparable in content and difficulty for use in re-evaluation or periodic testing. They are without time limits.

ABLE will reveal the relative strengths and weaknesses of an individual from one school subject to another, but it was not designed to diagnose what specific problems a student has within each subject area. The response mode of ABLE varies with each particular test, since the multiple-choice type of item was not considered suitable for adults in every skill tested.

VOCABULARY:

The student's vocabulary is assessed independent of reading ability, since the vocabulary test is dictated in its entirety. This is a test of auditory vocabulary. In the poorly educated adult, the auditory vocabulary is typically greater than his speaking or reading vocabularies. This test contains 50 multiple-choice type items in which the student listens to sentences where three alternatives are given for the last word in each sentence, and he must choose the correct one of three responses. He is not required to read a single word.

READING:

The reading test (51 items) determines how well the student can understand the meanings of sentences and paragraphs which he reads. The test consists of paragraphs of gradually increasing length and difficulty. The student responds by selecting one of three choices for a missing word or phrase. The reading paragraphs contain a great variety of content, and there is a heavy emphasis upon the everyday life of adults. This test establishes the functional reading level of adults but does not reveal what particular aspects of the reading process a student has difficulty with.

SPELLING:

Spelling ability is measured by a dictation-type spelling test of 30 items. Each word is pronounced by the examiner, an illustrative sentence is read, the word is repeated, then the student writes the word in his booklet. The spelling words were chosen with several criteria in mind. They are representative of the types of words that any adult will need in his own written communication. Also, they represent the various parts of speech; and they sample the most common rules of spelling phonics. Finally, the words are used in such a way in the illustrative sentences to be real to adults, thus providing the necessary motivation for sustained effort throughout the testing.

ARITHMETIC

To obtain a valid measurement of the student's arithmetic ability, both an arithmetic computation part and an arithmetic problem solving part were included. The two are administered and scored separately, but the raw scores may be combined into one for a total arithmetic score. It gives an indication of relative strength in the two areas sampled in the two subtests, but does not yield diagnostic information.

The arithmetic computation test (Part A) contains 30 open-ended arithmetic problems in the four basic processes. The arithmetic problem solving test (Part B) is a test of practical application of these processes in the solution of 20 everyday problems. The problem solving test at both levels uses a multiple-choice format. The reading element has been eliminated at Level I. At Level II, the items are printed in the test booklet.

ANALYSIS OF LEARNING POTENTIAL
Walter N. Durost, Eric F. Gardner, and Richard Madden
Harcourt Brace Jovanovich, Inc. 1970
Grades; Advanced I, 7 to 9
Advanced II, 10 to 12

The analysis of learning potential (ALP) series consists of five batteries designed in grades 1 through 12. The various batteries are appropriate for measuring adequately the wide range of abilities found among pupils in the grades for which the batteries were designed. It is recommended that less able pupils in the first half of grades 7 and 10 be tested with the next lower battery instead of the level normally recommended for grade level. This flexibility permits more dependable measurement of abilities in atypical pupils.

Answer folders or answer sheets may be scored either by hand or machine. Answers can not be marked in the test booklets. An electronic scoring and reporting are available. Test battery is available in Form A and Form B, and all norms apply equally to either form.

The specific test included in the Advanced II battery and the original underlying rationale for each is given below:

Word meaning: Test 1. The 38 items in this test assess the ability to recognize whether pairs of words are the same, the opposite, or neither in meaning. Knowledge of word meanings was presumed to underlie success in those curricular areas requiring the use and understanding of language. Test time, 6 minutes.

Number Relations; Test 2. The 16 items in this assess the ability to educe the number relation of two ordered pairs, and to apply this relation in constructing a third ordered pair. It was hypothesized that this is an ability essential for success in mathematics. Test time, 6 minutes.

Word Categories; Test 3. Each of the 34 words in this test must be classified in one of four categories. The test was devised to sample a variety of reasoning abilities believed to underlie success in a number of school subjects. Test time, 7 minutes.

Spatial Reasoning; Test 4. The 18 items in this test measure certain two-dimensional and three-dimensional spatial visualization abilities. It was hypothesized that these spatial abilities might be important for success in scientific and technical subjects. Test time, 10 minutes.

Number Fluency: Test 5. The 20 items in this test measure facility in performing the basic number operations with two- and three-digit numerals. Test time, 5 minutes.

Number Operations Reasoning; Test 6. The 17 items in this test measure insight into the algorithm of a number operation. Solving the items requires discovering the appropriate operation, and then supplying the missing numeral. Emphasis is placed upon measuring basic algorithms essential for success in mathematics. Test time, 10 minutes.

Word Clues; Test 7. The 20 items in this test assess the ability to supply contextual synonyms--an important element in reading. An aided recall format is employed to approximate more closely the reading process. Test time, 6 minutes.

Syntactic Clues; Test 8. The 20 items in this test use a carefully devised artificial language to assess generalization of language with respect to morphemes and syntax. It was hypothesized that this type of language analysis task underlies success in the language arts and foreign language areas. Test time, 9 minutes.

Evidence Evaluation; Test 9. The 25 items in this consist of statements of evidence relating to a particular situation. The validity of the original conclusion must be evaluated in view of the new evidence presented. This logical reasoning ability was presumed to underlie success in a number of curricular areas. Test time, 9 minutes.

INTERPRETATION OF TEST RESULTS

Raw scores obtained for administering the ALP convey only limited information. More usable interpretations can be made when the obtained raw scores are converted to appropriate types of derived scores. Norms tables for converting ALP raw scores to various types of derived scores are presented in the norms conversion booklet. These tables make it possible to interpret pupil performance with respect to the age and the grade samples tested in national standardization program.

Raw scores are first converted to normalized standard scores. This can provide an index of learning potential and a general composite of standard score. If only a cluster of tests designed to predict success in a single curricular area has been administered, a single composite prognostic score is derived. Though these three types of scores differ with respect to their normative reference groups, they employ the same basic type of standard score system. Each is therefore a normalized standard score having a mean of 50 and a standard deviation of 15.

Standard scores can be converted into corresponding percentile rank as stanines by using the tables in the norms conversion booklet. The standard score-percentile rank-stanine conversion table applies to any of the three types of scores obtained from any level of the test.

If all the tests of the ALP battery have been administered, a special analysis may be performed to identify those pupils whose reading and mathematics composite prognostic scores differ to such an extent as to suggest additional diagnostic testing, and the collection of additional information about actual past performance in these two major curricular areas.

If such a check is desired,both the reading and mathematics composite prognostic scores are derived in the manner specified in the norms booklet. If the difference between the two obtained standard scores is at least eleven units in favor of either score, then users may conclude that performance in these two areas is different enough to warrant further investigation.

TEST PUBLISHERS

Acorn Publishing Company, Rockville Center, Long Island, New York

American Guidance Service, Inc., 720 Washington Ave. S.E., Minneapolis, Minn. 55414

Bobbs-Merrill Company, Inc., Test Division, 4300 West 62nd Street Indianapolis, Indiana 46206

Bureau of Educational Measurements, Kansas State Teachers College Emporia, Kansas 66801

California Test Bureau, Del Monte Research Park, Monterey, Calif. 53940

Columbia University, Teachers College Bureau of Publications, 525 W. 120 St. N.Y., N.Y. 10027

Educational Developmental Laboratories,
Huntington, New York
Educational Testing Service, Cooperative
Test Division, 20 Nassau St.,
Princeton, N.J. 08540
Follett Publishing Co., 1010 W. Washington Blvd., Chicago, Ill. 60607
Ginn and Co., Statler Bldg., Back Bay
P.O. Box 191, Boston, Mass. 02117
Gryphon Press, 220 Montgomery St.,
Highland Park, N.J. 08904
Guidance Testing Associates,
6516 Shirley Ave., Austin, Tex. 78752
Harcourt Brace Jovanovich, Inc.,
Test Division, 757 Third Ave.
N.Y., N.Y. 10017
Houghton Mifflin Co., Test Department,
110 Tremont Street, Boston, Mass.02107
The Psychological Corp., 304 East 45 St.,
N.Y., N.Y. 10017
Psychological Institute, P.O. Box 1118,
Lake Alfred, Florida
Psychologists and Educators, Inc.
Jacksonville, Ill. 62650
Reader's Digest, Educational Division,
Pleasantville, N.Y. 10570
Riverside Publishing Co., 1919 South
Highland Ave., Lombard, Ill. 60148
Science Research Associates,
155 N. Wacker Drive, Chicago, Ill.
60606
University of Minnesota Press,
Minneapolis 55414
Stanford University Press,
Stanford, California 94305
Western Reserve University Press,
Psychological Research Services
11105 Euclid Ave., Cleveland, O. 44106